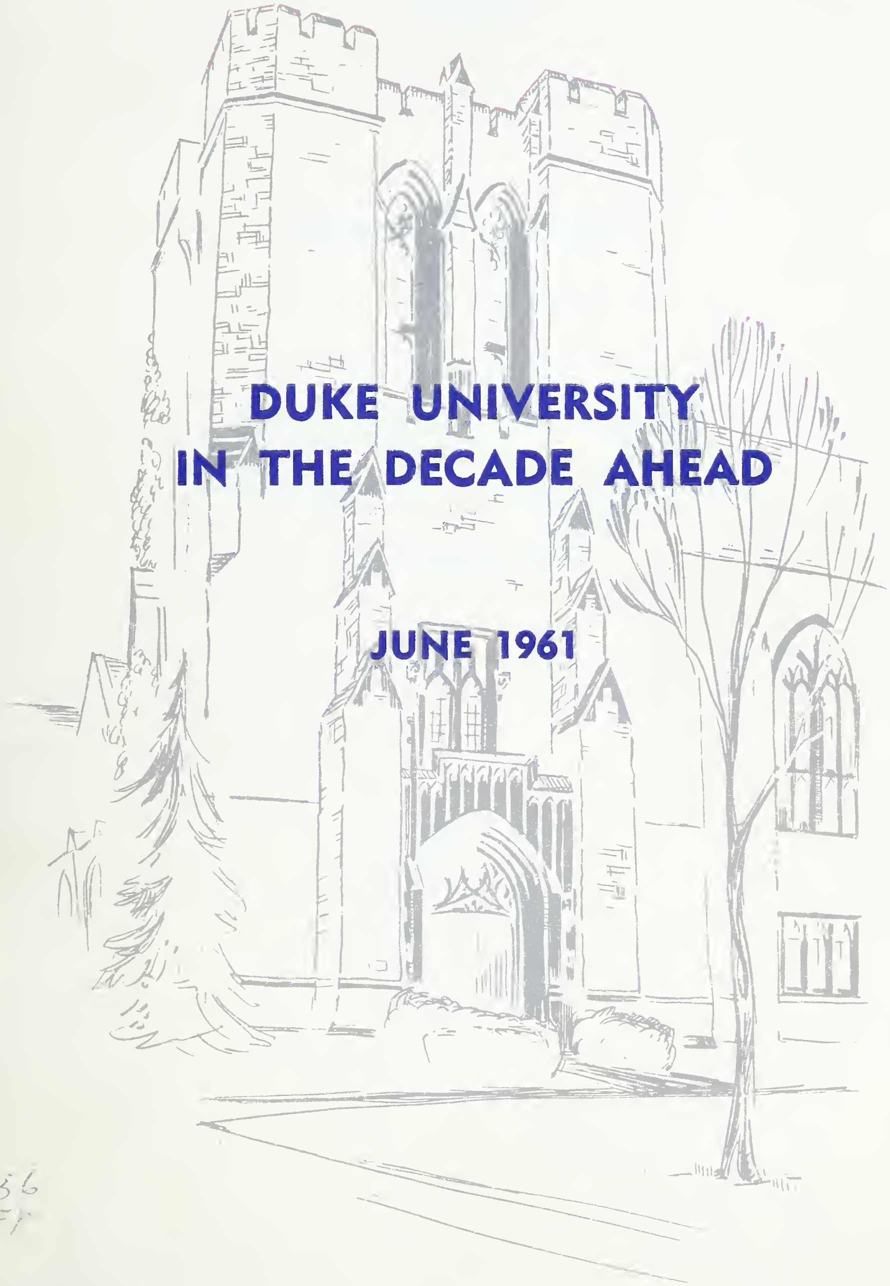
~~Letter to John Fisher~~

History



DUKE UNIVERSITY IN THE DECADE AHEAD

JUNE 1961

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1961

Prepared by

THE UNIVERSITY COMMITTEE
ON LONG-RANGE PLANNING
DUKE UNIVERSITY, DURHAM, N. C.

The tower and entrance to the University Library, which form the cover of *Duke University in the Decade Ahead,* was designed by Professor Earl Mueller of the Art Department.

DUKE UNIVERSITY IN THE DECADE AHEAD

THIRD PROGRESS REPORT

Prepared by

THE UNIVERSITY COMMITTEE
ON
LONG-RANGE PLANNING

DUKE UNIVERSITY JUNE, 1961

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Introduction

By the fall of 1960, the hard work and cooperation of a large number of individuals, subcommittees, departments, and schools had brought to the attention of the Planning Committee an imposing array of needs related to the building of a greater Duke University. As the Committee began its third year of intensive study, it faced the problem of how best to contribute to the satisfaction of all worthwhile needs without dissipating its energies on too broad a front. Early in the fall, it decided to devote its major effort to the preparation of a ten-year projection embodying estimates of enrollments and of needs in staff, physical facilities, and financial resources.

Of all the tasks the Committee might have undertaken, such a projection seemed to be the best preparation for intelligent action in the realm of actual development. The appointment this spring of a Vice President for Institutional Advancement indicates that the University is preparing for increased action in this area.

The Committee first turned to the departments, schools, and other units of the University for their own estimates of needs in the areas mentioned. To be sure that it understood these needs as fully and correctly as possible, it invited deans, department chairmen, and representatives of other divisions to appear before the Committee to explain or amplify their written reports. Many of them accepted the invitation and contributed significantly to the Committee's understanding of their plans and aspirations.

When the requested data had been received, they were summarized for use in the Committee's deliberations. Some of the summaries made are presented in graphic form in this report; most of them are projections and, as such, represent the thinking of the different divisions of the University rather than that of the Committee. The commentary that accompanies the summaries represents the Committee's own viewpoint. If this viewpoint does not always accord with the departmental projections, it is mainly because the committee has been able and obliged to take a wider view than is possible at the department level.

The ten-year projections constitute the major part, though not all, of this *Third Progress Report.* The first chapter is largely historical. Even though it repeats some previously published material, the Committee considers it a suitable background for the projections. Its inclusion permits an intelligent reading of this *Report* without reference to the previous *Progress Reports.* The final two chapters provide a brief account of the work of the Subcommittees and a statement on the future of planning at Duke University.

Duke University in the Decade Ahead is presented to the President of the University, who has participated in many of the Committee's deliberations, for distribution to Trustees, Faculty, Staff, and such other persons and groups as he may direct.

CHAPTER I

The Origins and Development of Duke University

This introductory chapter focuses on the origins and development of Duke University and indicates the basic continuity of its historical evolution.

Trinity College. The history of the College begins with the founding in 1839 of Union Institute, which became Trinity College in 1851. By the end of the first decade of the Twentieth Century, it had already achieved academic distinction in the Southeast. Its undergraduate teaching program was sound; its literary and historical studies were widely known and respected. Although a private institution, it was active in the cause of public education. Throughout its entire history, it participated vigorously in the professional training of teachers. One early landmark in this history was the founding in 1919 of the Summer Session of Trinity College, a unique instrument for teacher training in this region at that time.

In even the briefest review of the origins of Duke University, it is proper to recall the College's traditional encouragement of scholarship and research. One token of this encouragement was a research committee appointed at the close of World War I and provided with modest funds to assist faculty members engaged in research.

Duke University. When James B. Duke decided in 1924 to contribute to the building of a private institution in the South with the goal of "attaining and maintaining a place of real leadership in the educational world," Trinity College already existed as a firm foundation on which to build. Within seven years, the University became a tangible reality, comprising an enlarged and re-built plant on the East Campus, a newly-erected plant on the West Campus, and all the schools and colleges now in existence.

The Colleges. The conversion of Trinity College into Duke University did not diminish the importance attached to undergraduate education within the institution. To the single undergraduate coeducational college of the past were added in time the Woman's College, the College of Engineering, and the School of Nursing. To mention these colleges is to suggest the curricular diversification which followed the achievement of university status, but diversification was not allowed to impair the strength of the liberal arts tradition. Trinity College and the Woman's College remain dedicated to this tradition. The tendency of the more specialized colleges has been to make ever greater use of the basic courses in arts and sciences. A common core of courses and a common devotion to sound teaching brings to the four colleges a useful degree of unity.

Within the colleges, curricular innovations occurred in various fields, particularly in the physical and biological sciences. New buildings and modern laboratories reflected here the increased emphasis throughout the country on teaching and research in science. Teacher training was improved in various ways. The emergence of a first-rate library supported the enrichment of undergraduate teaching and provided wider opportunities for continuing humanistic, historical, and scientific studies.

Research. The most important result of the transformation of Trinity College into Duke University was the growth in the amount of research and in the variety of graduate and professional education. The philosophy and techniques of research were already understood in the College. A decade after the founding of the University, the research committee mentioned above was converted into a University Council on Research. The activity of this Council remained a function of the Faculty. Since the time of its founding, the Council has fostered in many ways the research interests of all the faculties of the University. Its grants-in-aid have often been of crucial importance. In some cases, they have attracted larger research funds from outside the University. In the early 1930's, the Council was instrumental in obtaining substantial funds from the General Education Board for broad programs in basic research. By reimbursement of travel expenses, it has permitted faculty members to attend and to contribute to the meetings of learned societies. The Council has subsidized the publication of important scholarly studies by members of the Faculty; it has aided research by the award of travel grants enabling faculty members to visit distant libraries and other repositories of original materials.

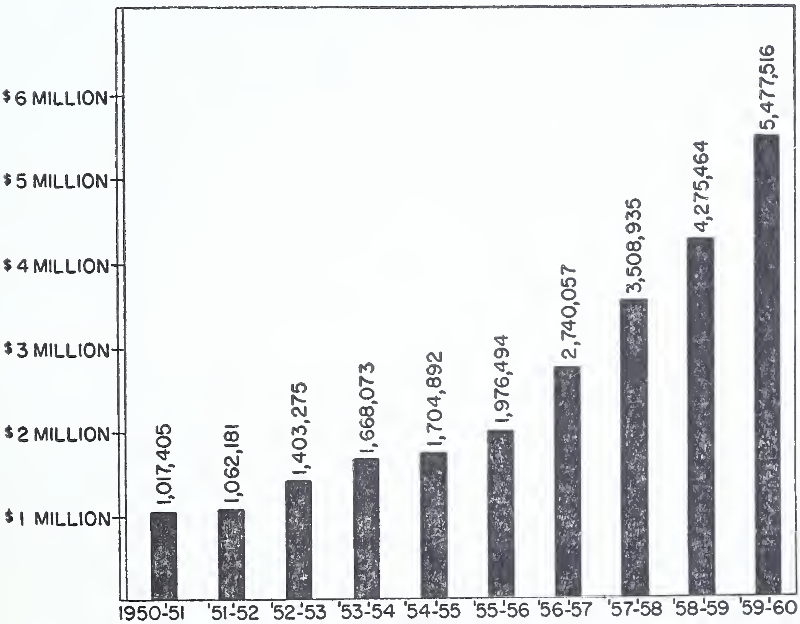
While a quantitative measurement of the University's research productivity is not necessarily indicative of value, its publication record is, nevertheless, significant. In the academic year 1934-35, 160 research contributions were published by members of the Duke Faculty. By 1958-59, the annual number had increased to 666 articles and 21 books and is still increasing. In the same period, the budget of the Council had increased fivefold.

It may be said, therefore, that basic research activity at Duke University has had a healthy growth. Beyond the broad academic significance of this research are the specific contributions made to the economy of the region in which the University is located, the important developments in the science and art of medicine, and the political, social, and humanistic studies that deal with general and specific problems of far-ranging interest.

In addition, the total research effort at Duke in recent years has had a very substantial growth quite apart from the funds of the Research Council. This larger activity has arisen from extramural grants and contracts. The development here is indicated in the growth of special grants and contract funds as shown in the following graph.

FIGURE A

GRANTS AND CONTRACTS FOR RESEARCH
1950 - 1960



The Graduate School of Arts and Sciences. Until 1916 Trinity College was an undergraduate institution. In that year, a very limited program of graduate instruction leading to the M.A. degree paved the way for the formal inauguration of the Graduate School of Duke University in the academic year 1926-27. The first Ph.D. degrees were conferred in 1928.

Behind this undertaking was a considered philosophy of the purpose and the kind of graduate instruction Duke desired to achieve. Here it is pertinent to recall the words of President William Preston Few:

> . . . as rapidly as we are ready for it we ought to separate more sharply between the college and the graduate school and give to the work of the graduate school a more distinctly university character than has heretofore been the rule in this country. I advocate less of fixed routine and more flexibility than is common in American graduate schools, less instruction by courses and lectures, and more individual effort on the part of the student under the guidance of the teacher.
>
> . . . I want to see the Graduate School made strong because it will best and most quickly insure our "attaining and maintaining a place of real leadership in the educational world." . . . more than anything else here our Graduate School will determine the sort of University we are to build and its standing in the educational world.*

During the past several decades, the phenomenal growth in mass education at the college level and the ensuing increase at the graduate level have reflected the impact of the scientific and social revolution of our times. The development of graduate studies at Duke University has moved with the trend of the times. Enrollment has climbed from 86 in 1926-27 to 772 in 1960-61. Despite this nine-fold increase in thirty-five years, Duke's annual production of graduates is still modest in relation to the numbers produced in some of the leading state-supported and private institutions, and it is not adequate to satisfy the growing needs for highly-trained personnel. The time is opportune for Duke to review again its potential in graduate education and to determine the role that graduate education is to play within the total framework of the University.

The Law School. As in graduate studies, so in law, foundations had already been laid by 1924. A small but good Law School had functioned since 1904. The Law School building was occupied in 1930, and during the succeeding academic year the reorganization and expansion of the School was completed, bringing with it recognition from the American Bar Association and membership in full standing in the Association of American Law Schools. Continued growth has made a larger building necessary, and one is being built as this report is published.

---

* Bulletin of Duke University, *Report of the President, 1925-31*, p. 18.

The record leaves no doubt that the men responsible for the welfare of the Law School were not concerned to create merely a professional training school for those who intended to practice at the bar, but rather a school which, along with professional preparation, would also provide liberal training in the law as one of the social sciences closely allied with government, economics, and international affairs. An important manifestation of the Law School's interest in such fields as these is its quarterly, *Law and Contemporary Problems.*

The Medical Center. When the starting class of 52 first-year and 18 junior students entered the new School of Medicine in 1930, medical education both in teaching and research was largely an uncultivated field in the South. In the years since that time, the impact of the Duke Endowment and of the Duke University Medical Center on health education, on medical practice, and on hospitalization in North and South Carolina and in the nation at large has been substantial. As early as 1910, William Preston Few was actively seeking to establish a four-year medical school in Durham. His conversations with James B. Duke, Dr. Watson S. Rankin, and Alexander H. Sands, Jr. were a part of the inspiration of the Duke Endowment and of one of its principal purposes: to assist selected hospitals and to establish a medical school.

The Center has pioneered in distinctive achievements which include: the first course in hospital administration, an outside obstetrical service in Charlotte, private diagnostic clinics, an effective vaccine against equine encephalomyelitis, numerous virus studies, a course for medical record librarians, the ultra-violet sterilization of operating rooms, an intensive nursing service, the first hospital blood bank, and an outstanding medical library.

The Divinity School. In accord with the emphasis Mr. Duke had placed on the training of preachers, the Divinity School, originally the School of Religion, began its work in the academic year 1926-27. Thus, instruction in religion continued to have its appropriate place in the University as it had in Trinity College. In the operation of the Divinity School, the relation which prevailed between the Methodist Church and the University combined the merits of autonomy with the strength of affiliation. The Divinity School was free from church domination. On the other hand, it could count on strong church support through the regional Methodist association.

Distinctive in the Divinity School's history has been the outstanding program of the Graduate Department of Religion within the Graduate School of Arts and Sciences. The Ph.D. degree in Religion came to be widely recognized. Another contribution to the University arises out of the interrelation of the Divinity School and the Department of Religion with the other schools and departments of the University. This is illustrated by such interdisciplinary programs as the Lilly Endowment Research Program in Christianity and Politics.

The School of Forestry. One of the great resources of the new University was the Duke Forest, which in 1931 was placed under intensive management to develop instructional resources and research in forestry. In the following year, an academic forestry curriculum at the undergraduate level was included in the program. This provided the basis for the later development of specialized and technical work in the professional school. At the time of the establishment of a graduate School of Forestry (1938), the only other American institution offering advanced work of this type was Yale University. The courses of the School of Forestry have been complemented by graduate offerings in related areas.

Supporting Components of the University. Teachers, students, and subject matter must be brought together in an environment conducive to effective work. This environment is made up of many components. Some of the important ones are the libraries, the laboratories, the University Press, the Forest, the Hospital, and the Administration. It seems appropriate to write here a word about each.

The strength of Duke's library resources today is a direct result of a philosophy reaching back into Trinity College and of the energy with which the faculties have put this philosophy to work. The books, journals, newspapers, manuscripts, and microfilms of the General Library are the working materials for students and faculty alike. In the days of Trinity the library contained about 75,000 volumes. Today it has close to 1,500,000 volumes, ranking ninth in number of holdings among the nation's private universities. It should be noted, too, that there has been a correlation between the developing excellence of Duke's library collections and the growth in size and quality of its research and graduate education.

Laboratories were a major component entering into the construction of the West Campus after 1924. Since that time the growth of the science departments and related departments and of the equipment and methods used in the laboratory for teaching and research have created new demands for space. A physics building, occupied in 1949, now requires expansion. A new biological sciences building will be completed this year. Other science departments have outgrown laboratories and are using outmoded facilities. Expansion is also underway at Duke's marine laboratories in Beaufort, North Carolina, one of the better locations in the country for teaching and research in marine biology.

The laboratory of a school of forestry is a forest, and here again the men who planned this University gave evidence of their foresight by providing a forest of some 7,200 acres. This forest is one of the unique assets of Duke University and, through the University, of the Southeastern region of the nation.

The Duke University Hospital, with close to 700 beds and an out-patient clinic capable of handling more than 200,000 visits per year, is a major adjunct of the University. It not only renders great public service; it also represents an indispensable agency for sound medical instruction in the Medical School and an invaluable resource to support the research program of the Medical Center.

The Trinity College (now Duke University) Press, founded in 1921, though not among the largest of university presses, has become well known through the publication of scholarly works by its own Faculty and other scholars. Pursuant to its policy of enlarging the audience of the University, the Press publishes a number of scholarly, scientific, and literary journals. As a group, they have achieved international recognition.

Modern universities have become extraordinarily complex institutions. Even those universities which, like Duke, have held their total enrollments relatively constant over the past decade have grown tremendously in other ways. The scientific revolution of our century has multiplied the activities of all the science departments and vastly increased their requirements for space and facilities. The trend toward statistical studies in the Social Sciences necessitates the use of expensive computers. Even the libraries and the language departments need the support of costly electronic equipment. These few examples are intended to suggest how varied and expensive are the activities of a modern university. Duke has become such a university.

It is obvious that so complex an institution as the one we have been describing must be managed efficiently if it is to flourish. Realizing this, the Trustees in the spring of 1960 hired a competent firm of management consultants to study the administrative organization of the University and to submit recommendations for improvement. These recommendations have been submitted and are being studied by the Trustees, the Faculty, and the officers of the Administration.

The purpose of the foregoing pages has been to describe concisely the origins and the essential outlines of Duke's development. They look backward to see where we have been and by what stages we have reached our present position. The succeeding chapters look to the future.

CHAPTER II

Projected Enrollments

Optimum Enrollment in the Colleges. Two major factors determine the optimum enrollment of the Undergraduate Colleges of Duke University: they have to do with facilities and with standards of quality. The size of the student body must be adjusted to the availability of academic facilities, such as libraries, laboratories, equipment, classrooms, lecture halls, offices, and research space, as well as to residential facilities, such as housing and dining, student health, infirmaries, gymnasiums and playing fields, auditoriums, and student centers. An adequate balance both within and between the two categories is essential. An increase in one item—housing, for example—produces a chain reaction affecting the whole complex of facilities.

The size of the student body must be commensurate with quality operation. Quality of operation is determined to a large extent by:

(1) The maximum ratio of faculty to students which will provide a personal element in instruction. This involves such items as the lecture-tutorial method, seminars, honors program, and the availability of competent instructional staff.

(2) The maximum ratio of administrative staff to students which will preserve a personal element in counselling. This involves such items as the number and quality of deans' staffs, house counsellors, housemasters, the guidance bureau, and faculty advisers.

(3) The maximum quality of the student body. This is directly related to selective admissions.

Between the fall of 1951 and the fall of 1960, the number of undergraduate men increased by over eight percent and the number of women by seventeen percent (see Table I). The increase in the total number of undergraduates was eleven percent. If the Nursing School students who enroll in college classes had been included, the percentage of increase in the undergraduate arts and sciences and engineering area would exceed fourteen percent. The projected expansion of physical facilities will do little more than correct current deficiencies resulting from the increase in the undergraduate student body during the past decade.

Table I

UNDERGRADUATE ENROLLMENT — REGULAR STUDENTS — IN TRINITY COLLEGE, COLLEGE OF ENGINEERING, AND WOMAN'S COLLEGE

Year	1951	1953	1954	1955	1957	1959	1960	Increase '51 to '60	Percent Increase '51 to '60
College of Engineering	350	472	464	496	479	508	511	161	46.0
Trinity College	1850	1768	1806	1878	1781	1848	1873	23	1.2
Undergraduate Men	2200	2240	2270	2374	2260	2356	2384	184	8.4
Woman's College	1029	1005	1040	1023	1155	1195	1203	174	16.9
Total Undergrad. Students	3229	3245	3310	3397	3415	3551	3587	358	11.1

The projected curricular programs are designed to provide quality education. If the student body is enlarged, more of the University's resources will have to be allocated to the Colleges merely to maintain present standards of quality. To raise these standards to the desired level will require restriction of admissions to the current in-put during the coming decade.

In the light of the factors outlined above, the optimum undergraduate enrollment is:

Engineering College	500
Trinity College	1900
Total Undergraduate Men	2400
Woman's College	1200
Total Undergraduates	3600

Acceptance of these figures means that the undergraduate colleges have already reached the maximum enrollment consonant with the objective of Duke University to provide quality education.* Further expansion would entail a clear modification in the character of the Colleges.

Optimum Enrollment in the Graduate School of Arts and Sciences. Optimum enrollment in the Graduate School of Arts and Sciences is determined partly by the relationship of graduate educational programs to their undergraduate counterparts and partly by special qualitative factors. The aims of graduate and undergraduate education are realized more efficiently together than separately. From the point of view of effective and efficient education, the joint use of faculty, classrooms, laboratories, and library facilities is highly desirable. Operated in this way, the graduate and undergraduate programs enrich one another.

Undergraduate students are traditionally given a large measure of freedom in selecting courses and major areas of study. These choices largely determine the basic commitment of university resources for staff and facilities in various areas. Admission to the Graduate School, however, is by area of study; for this reason, it is a relatively simple matter to control the size of graduate enrollment in any particular field. Graduate enrollment can therefore be adapted to the capacity of a department to handle advanced students. While this capacity does not dictate any overall optimum size for the Graduate School, it does suggest a desirable pattern—a pattern which would encourage a much larger graduate enrollment in, say, History or English, than in Philosophy or Germanic Languages and Literature. The first two departments have considerably larger undergraduate enrollment than the last two; therefore, they can accommodate more graduate students.

From an appraisal of the qualitative factors affecting desirable enrollment levels, it is clear that optimum enrollment for a single departmental program in a university like Duke is usually in the range of 30 to 100 students. Instruction by seminar, accessibility of senior faculty, and availability of library materials and laboratory equipment point toward the smaller figure; the effective utilization of specialists on the faculty and the stimulation toward self-education which students receive from association with other highly motivated graduate students argue in favor of the larger figure. The fields involved and the traditional sub-divisions into areas of specialization help to determine the most favorable combination of students and faculty.

---

* The undergraduate admissions policy advocated in this report is in accord with the policy expressed on numerous occasions by the President in speeches and annual reports. In the *Report of the President* for 1956-57, he made the following statement: "We were determined to continue to administer a fair, balanced admissions policy, bearing in mind that we do not have access to infallibility and that we must help the public to understand the importance of institutions whose facilities and philosophies direct them to emphasize quality above numbers" (pp. 9-10). In the Founders' Day Address of 1958, he reminded his audience "that 10 years ago we 'agreed to agree' that a total figure of from 5,000 to 5,500 was a manageable one for our institution." In the *Report of the President* for 1958-59, he declared it to be his "personal feeling that the Undergraduate Colleges deserved a central place in all our planning, but not with a view toward expansion" (p. 7).

In recent decades, few Graduate Schools have had to worry about overcrowding; the problem has been, rather, to find sufficient numbers of qualified students. A number of forces acting on graduate education will likely reverse this situation. The number of eligible persons in the age group 21 to 26 will increase sharply during the present decade. Thus, even if the same fraction of the population as at present continues to seek graduate training, the pressures on enrollment will be markedly upward. In fact, however, a rising proportion of the college-age population is now completing a baccalaureate degree and will therefore be in a position to enter graduate programs. In addition, the demands of education, industry, and government for highly trained teachers and researchers are encouraging a rising proportion of college graduates to obtain higher degrees before entering upon their careers. The combination of these factors will place heavy enrollment pressures on the graduate schools in the period from 1965 to 1980.

While Duke University has some responsibility to help meet these increasing demands, it is recognized that graduate education is even more expensive than undergraduate education because of the special needs for outstanding faculty, library resources, and laboratories. Consequently, one cannot recommend substantial expansion without concern for expense. Experience at Duke University, corroborated by numerous studies of the general pattern for other universities, indicates that there are marked "economies of scale," as graduate enrollment rises from zero up to an average level per department of about 50-60 (somewhat greater in some subject areas, slightly less in others). Beyond this level of most efficient instruction, duplication of faculty and facilities makes for mounting costs per student.

The forces at work to increase the number of applicants for admission to American graduate schools will enable Duke to enlarge its graduate student body. It should do this in a controlled and selective way. The pattern of undergraduate enrollment and the qualitative factors mentioned earlier suggest that optimum graduate enrollment at Duke over the next decade will be about 60-90 students for the departments of Chemistry, Education, English, History, Physics, and Psychology; 40-60 for Biochemistry, Botany, Economics, Mathematics, Political Science, Religion, Romance Languages, and

Zoology; and 20-40 for Anatomy, German, Microbiology, Philosophy, Physiology, and each of the three Engineering departments. Thus, total enrollment would be approximately 1,200 for these fields of graduate study and somewhat larger if new graduate degree programs should be added in the next decade.

The same upward pressure on enrollment envisaged by the Graduate School of Arts and Sciences will be experienced, to a greater or lesser degree, by the professional schools. The present enrollment and the projected enrollment of the professional schools are as follows:

School	*1960*	*1970*
Divinity	262	300
Forestry	73	90
Law	194	325
Medicine	312	400
Nursing	290	375

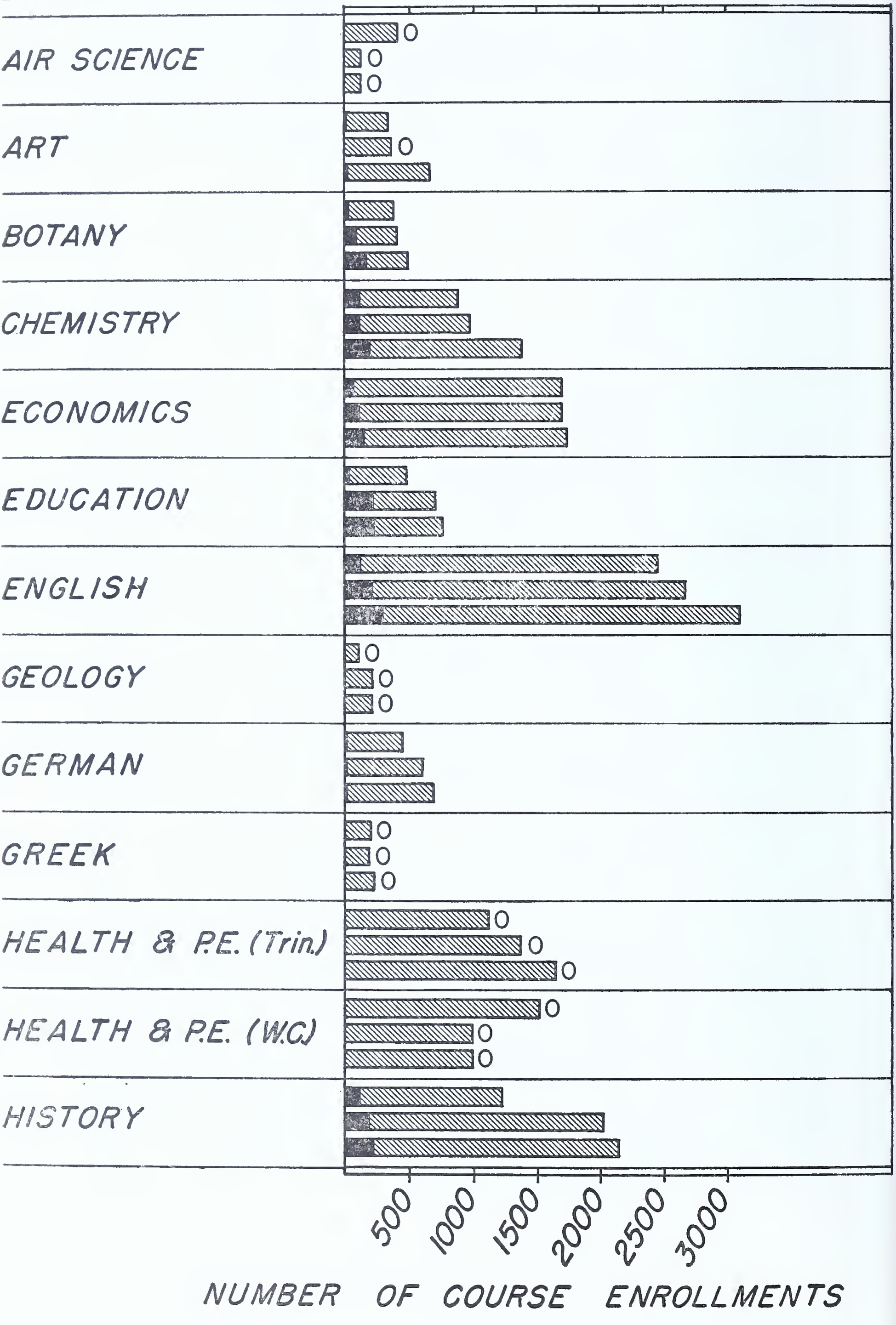
Anticipated Course Enrollments. The foregoing pages deal with the determination of future enrollment in terms of persons. It is more difficult to determine future course enrollments. In an effort to throw some light on this matter, the Committee asked the Departments to estimate their course enrollments for the next ten years. Their estimates of undergraduate and graduate enrollments for 1970 compared to the actual enrollments for 1950 and 1960 are shown in Figure B.

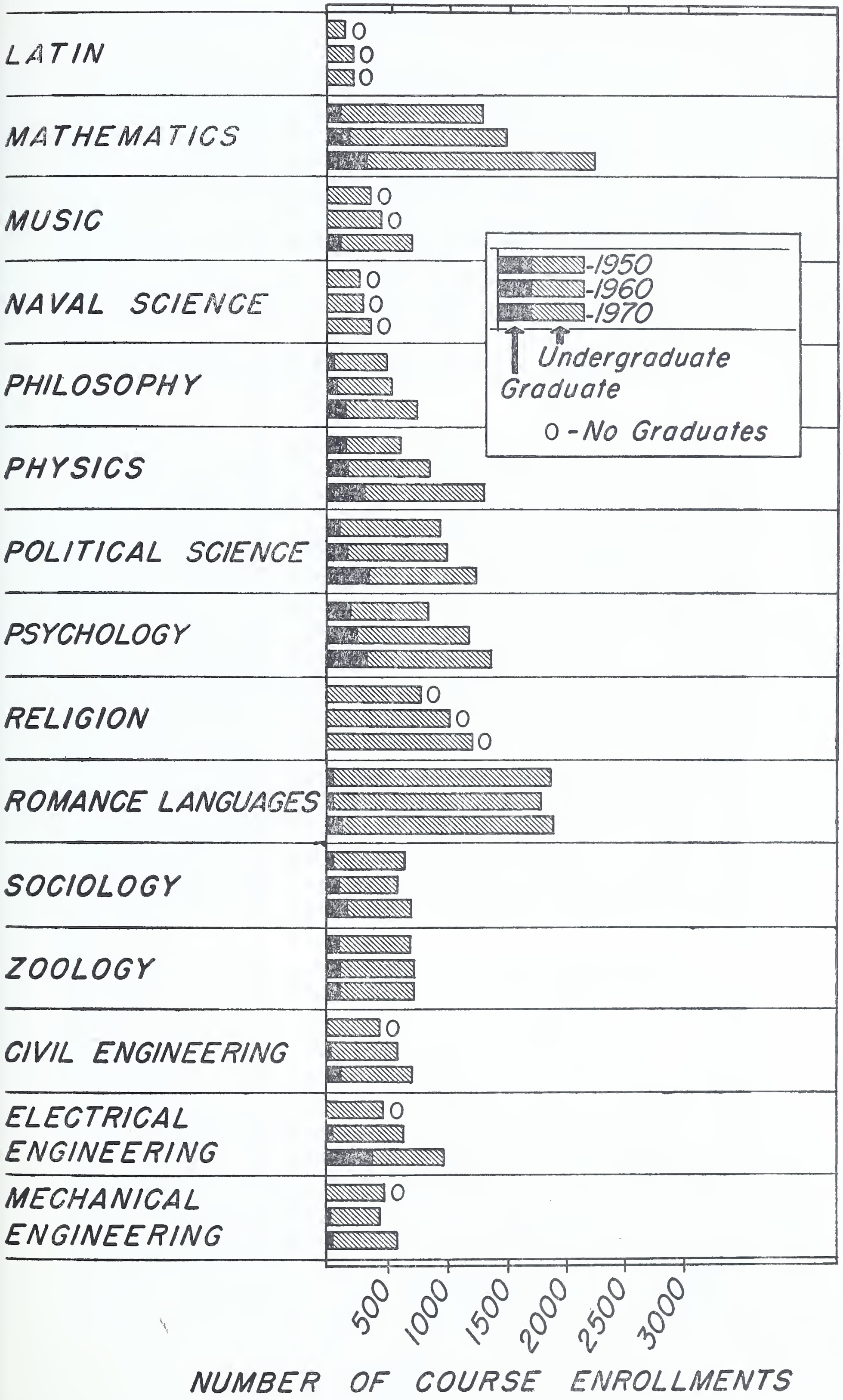
The graph shows that no departments anticipate declines in enrollments over the coming decade, and some anticipate substantial increases. If the size of the student population is controlled as suggested in the preceding pages and if substantial increases occur in some departments, it is obvious that some decline must take place in others. It is idle to try to specify department by department where the increases and decreases will occur. There is one area, however, where predication of increases seems safe: science and mathematics.

Among the departments projecting substantially larger enrollments at both the undergraduate and graduate levels are Chemistry, Mathematics, and Physics. Their projections are in line with the national trend, which continues to rise in response to the growing demand for chemists, mathematicians, and physicists. The growth of these departments will be pushed still further by new developments in other scientific fields. As the biological sciences make more use of the quantitative methods of the physical sciences, heavier curricular demands will be made of the latter. In addition, expansion of programs in Engineering should produce enlarged enrollments in Chemistry, Mathematics, and Physics.

COURSE ENROLLMENTS BY DEPARTMENTS IN ARTS & SCIENCES AND ENGINEERING: 1950, 1960, 1970

FIGURE B




LATIN
MATHEMATICS
MUSIC
NAVAL SCIENCE
PHILOSOPHY
PHYSICS
POLITICAL SCIENCE
PSYCHOLOGY
RELIGION
ROMANCE LANGUAGES
SOCIOLOGY
ZOOLOGY
CIVIL ENGINEERING
ELECTRICAL ENGINEERING
MECHANICAL ENGINEERING
-1950
-1960
-1970
Undergraduate
Graduate
0 - No Graduates
500
1000
1500
2000
2500
3000
NUMBER OF COURSE ENROLLMENTS

CHAPTER III

Faculty and Staff Requirements

The wealth of a university consists above all else in the number of superior men and women on its Faculty. This is so because the scholarly tone of a university and the quality of the education it offers are determined by human personalities; it is so because a superior Faculty serves to attract and hold superior people, both professors and students. It follows, then, that to build a greater Duke no single step is so important as the strengthening of its Faculty. This has been a major premise in the thinking of the Planning Committee.

During the first semester of the current year, the Committee received from the departments, schools, and other divisions of the University data calculated to show staff requirements for the coming decade. The information collected reveals genuine needs for additional staff in all areas of the University. These needs have been carefully considered. Since proposed additions to the Faculty are more numerous and therefore more expensive than other proposed additions to the staff, the Committee has elected to make the former the principal topic of this Chapter. They are summarized in Table II.

The table shows that the collective opinion of the departments and schools is that in ten years Duke will need to enlarge its present Faculty by almost one hundred and fifty persons. Stated one way, this estimate means enlarging the Faculty by one-third; stated another way, it represents approximately a three percent increase compounded annually over the next ten years. An average annual increase by such a percentage is somewhat greater than the rate of increase over the past decade. It is well to remember, too, that the past growth in instructional staff was accompanied by some increase in undergraduate and graduate enrollments. Unless future enrollments are carefully controlled, the projected enlargement

FACULTY PROJECTION — RETIREMENTS, REPLACEMENTS, AND DESIRABLE ADDITIONS, BY SCHOOLS AND COLLEGES
1961-1970
(Medical Center and Nursing Not Included)

Department		*ARTS & SCIENCES & ENGINEERING*				*DIVINITY SCHOOL*				*SCHOOL OF FORESTRY*				*SCHOOL OF LAW*				*TOTALS, ALL SCHOOLS & COLLEGES, BY RANKS*				
Faculty by Rank		*Prof*	*Assoc Prof*	*Asst Prof*	*Inst*	*Prof*	*Assoc Prof*	*Asst Prof*	*Inst*	*Prof*	*Assoc Prof*	*Asst Prof*	*Inst*	*Prof*	*Assoc Prof*	*Asst Prof*	*Inst*	*Prof*	*Assoc Prof*	*Asst Prof*	*Inst*	*Grand Totals*
Faculty,	1960-61	113	96	88	89	8	10	4	0	5	3	4	0	12	2	1	0	138	111	97	89	435
Projected Retirements, Resignations 1961-1970	1961-62	7	4	3	16	1				1				2				11	4	3	16	34
	1962-63	1	1	1	8					1								2	1	1	8	12
	1963-64	1	1		7													1	1	0	7	9
	1964-65	5	2	1	5													5	2	1	5	13
	1965-66	6		2	7	1												7	0	2	7	16
	1966-67	2			4									1				3	0	0	4	7
	1967-68	5			8													5	0	0	8	13
	1968-69	4	1	1	4	1								1				6	1	1	4	12
	1969-70	4	2	1	8													4	2	1	8	15
Total Retirements by Rank,	1961-70	35	11	9	67	3	0	0	0	2	0	0	0	4	0	0	0	44	11	9	67	131
Projected Replacements 1961-1970	1961-62	7	5	6	12		1			1				1		1		9	6	7	12	34
	1962-63	1	1	1	8						1							1	2	1	8	12
	1963-64	1		2	6													1	0	2	6	9
	1964-65	3	1	4	5													3	1	4	5	13
	1965-66	1	3	1	10	1												2	3	1	10	16
	1966-67			2	4										1			0	1	2	4	7
	1967-68		1	2	10													0	1	2	10	13
	1968-69	1	2	3	4	1										1		2	2	4	4	12
	1969-70	2	2	2	9													2	2	2	9	15
Total Replacements by Rank,	1961-70	16	15	23	68	2	1	0	0	1	1	0	0	1	1	2	0	20	18	25	68	131
Desirable Additions 1961-1970	1961-62	12	11	17	3		1	1			1							12	13	18	3	46
	1962-63	6	10	5	6						2							6	12	5	6	29
	1963-64	3	7	6	7	1		1						1				5	7	7	7	26
	1964-65	1	2	3	4		1	1			1					1		1	4	5	4	14
	1965-66	1	5	3	5													1	5	3	5	14
	1966-67	1	1	3	1													1	1	3	1	6
	1967-68		3	1	1											1		0	3	2	1	6
	1968-69		1		2													0	1	0	2	3
	1969-70		2	1	1													0	2	1	1	4
Total Additions by Rank,	1961-70	24	42	39	30	1	2	3	0	0	4	0	0	1	0	2	0	26	48	44	30	148

of the Faculty will not serve to raise the quality of instruction and research.

Returning to the table, one sees that half of the proposed additions to the Faculty are desired in the next two years. It is evident that the departments are impatient to satisfy their staffing requirements and thereby attain their ideals of academic excellence. If they were not, Duke could hope for little progress. It is evident, too, that the drive for excellence will put a heavy burden on our budget. The dimensions of the burden can best be seen in the financial projections which appear in Chapter V. However, it is unrealistic to suppose that seventy-five professors can be added to the Faculty in two years.

What purposes are to be served by these new professors and instructors? With the expressed views of the schools and departments as a guide, the following reasons may be mentioned: to achieve a more favorable student-faculty ratio, to reduce teaching loads, to accommodate more frequent leaves, to strengthen existing programs of teaching and research, and to add new programs of teaching and research. Considered singly, each of these purposes is legitimate. Taken together and in the context of our present and probable future resources, some kind of selection and adjustment is clearly necessary. The considerations and principles which have guided the Committee's thinking on the uses of Faculty additions occupy the rest of this Chapter.

The Undergraduate Colleges were the focus of the *Second Progress Report*. In it was quoted President Few's pledge "to keep the college and to make it as good a college as it is possible to make." The Committee honors this pledge and repeats it here, so that nothing of what is later said about the Graduate School will be interpreted as a threat to the growing excellence of the Undergraduate Colleges. These are the foundation of the University, and they will greatly profit by whatever is done to strengthen the Faculty and to improve its working conditions. The Colleges will also profit by an improving student-faculty ratio calculated to be under ten to one by 1970. In a very real sense, then, Faculty additions are made for them as much as for the graduate and professional schools. In another sense, the additions are not made for the Undergraduate Colleges, since the Committee does not recommend increased enrollment for these Colleges as it does for the Graduate School. The Committee anticipates pressures to enlarge undergraduate enrollments, but it knows, as was suggested in Chapter II, that our total facilities for training and housing undergraduates will not allow increased numbers without endangering the quest for excellence which is our first objective.

A certain number of the contemplated Faculty additions are intended to strengthen the Graduate School and to allow it to augment its enrollment by 1970 to about 1200. Some of the considerations which led the Committee to recommend such expansion and strengthening are given below.

Are there compelling reasons for believing that Duke has both the obligation and the basic resources for attempting to become a great center of advanced study? The Committee thinks there are. In many quarters, much has been said of the desperately-growing need for more and better trained personnel in the learned professions, in scientific research, in industry, and in government. If the need truly exists, then institutions with the potential to become graduate centers have a clear obligation to do so.

What are some of the resources which encourage Duke to believe it can become one of the leading centers of advanced study? Perhaps the libraries should head the list. Ranking ninth in number of volumes among the nation's private universities, the General Library's collections are adequate to support the kind of graduate and research program which would entitle Duke to a place among the top ten institutions of higher learning in the United States. If one takes into consideration the cooperative arrangement between the Duke libraries and those of the University of North Carolina, it becomes evident that our library wealth is truly exceptional. One way of stating the present challenge to Duke would be to say that its graduate and research programs must move to match the excellence of its library resources.

Some of the strengths of the professional schools were mentioned in Chapter I. Here it may be said that these strengths are assets of the Graduate School of Arts and Sciences as well. Cooperation is already extensive and productive; the potential for further cooperation is great.

There are advantages to Duke's location. Consider, for example, the ultra-modern scientific laboratories already built or projected in the Research Triangle. It should be remembered that the Research Triangle itself came into being where it is because of the existing educational institutions which mark the apexes of the chosen triangle. And it is clear that the Forest Disease and Insect Laboratories of the Southeastern Forest Experiment Station now being built on the Duke side of the Research Triangle by the United States Forest Service were attracted to this site in part because of the reputation of our graduate School of Forestry. It is equally clear that the presence of these laboratories will add to our capacity for advanced training and research. One last word about the location of Duke: far from being isolated, the University is but an hour by air from the libraries, archives, and research facilities of Washington, D. C.

What else is needed to assure Duke a place among the finest graduate centers in America? Outstanding scholars and teachers, of course, and this brings us once more to the central theme of this chapter: Faculty. It is the earnest purpose of the University to strengthen the Faculty in every possible way. To this end a maximum effort is being made to increase the number of James B. Duke Professorships and to create a substantial number of other distinguished professorships.

How should major additions to the Faculty be distributed among the schools and departments? It is extremely difficult to arrive at any final answers to this question. Nevertheless, some guiding principles can be formulated.

Among the guiding principles, let this one stand first: the strengthening of existing departments should precede innovation and expansion. This does not mean that innovations and experiments are not anticipated in the coming decade; it merely means that foundations must be made secure before we deliberately seek new areas to develop.

Assuming, as we must, that desirable additions to the Faculty will have to be spread over a number of years, where do we start? Clearly, it is difficult to establish an objective hierarchy of priorities among the departments. It is plain, however, that a high priority must be assigned to securing for all departments some minimum standard of excellence. With this proviso accepted, difficult choices still remain to be made. Our ultimate goal is, of course, to make certain that all departments have the opportunity to become truly eminent. Since all the steps required to achieve this goal cannot be taken simultaneously, the Committee agrees that a flexible interpretation of building from strength must be our initial policy.

As we contemplate the process of building an ever-more-distinguished Faculty, still other principles assume importance. The essence of a number of these may be expressed in the concept of a balanced university. Balance means we cannot do everything. It means that we must seek, largely within our present framework, a harmonious relationship between teaching and research, between undergraduate and graduate education, between training in the liberal arts and training in the professional schools. As much as anything else, it means fidelity to the tradition of the liberal arts college from which we sprang.

CHAPTER IV

Space Requirements

Although the wealth of a university consists above all else in the number of superior men and women on its Faculty and staff, that Faculty and Staff cannot do superior teaching and research without adequate libraries, offices, laboratories, and classrooms. Therefore, the departments, schools, and other divisions of the University were asked to submit estimates of their needs for additional space during the next decade.

These requests are not presented in tabular form, because such a presentation would be exceedingly complex. For example, as new buildings are completed, the vacated space is renovated and used to meet the requirements of other departments and schools. Thus, when the new Biological Sciences Building is completed, the present Biology Building will be available for Psychology and Sociology; and when the new Law School Building is occupied, the present building will be assigned to other departments. In planning, little can be gained by totaling the space requested; rather, the individual requests must be supplemented by a space inventory and a space use analysis, such as those now being prepared by the Business Office. In order to plan intelligently for the future, the present must be accurately appraised and understood.

The need for additional buildings is acute in some areas, in spite of the fact that over one million square feet of space have been constructed since the end of World War II. To accommodate adequately programs in existence and in prospect, considerably more space than is now available will be needed.

An analysis of the present available space is presented before plans for future development are set forth. For a better understanding of the analysis of the existing 3,100,000 square feet of space (exclusive of the Hospital) and of some implications of future requirements, certain general observations should be noted:

(1) Duke University has traditionally been a residence institution. As a result, the amount of space devoted to auxiliary enterprise activities (housing, dining, stores, and laundry) is large. Because of this, the proportion of space for instruction and research is often lower than in some other first-rank universities.

(2) Investment in physical plant is higher at Duke than in many, if not most, educational institutions, because stone Gothic buildings are expensive per unit of usable space.

(3) Physical plant expansion requires additional funds for maintenance and repairs. Because of this and because of the large investment involved, optimum usage of existing plant should be attained before funds are invested in additional physical plant.

Analysis of Existing Space. The present physical plant of Duke University represented on June 30, 1960, an investment, at cost, of $62,440,751. The summary of space by types of use which appears in Table III represents only part of this investment, as the summary does not include Hospital space devoted to the care and treatment of patients; it does include the Medical School proper as well as the Bell Medical Research Building.

Table III

SUMMARY OF PRESENT USE OF SPACE (1961) AND PERCENTAGE OF TOTAL SPACE ASSIGNED TO EACH CLASSIFICATION

	*Classification**	*Square feet assignable*	*Percent of total assignable*
1	Instruction	344,310	19.97
2	Research	172,654	10.02
3	Administration	61,459	3.56
4	Libraries	148,288	8.59
5	Student Services	159 362	9.24
6	Auxiliary Enterprises	641,168	37.16
7	Plant Operations	65,716	3.83
8	Circulatory Space	2,179	.02
9	Accessory Space	131,043	7.61
	Total	1,726,179	100.00

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* Definition of classifications:

1. Instruction: classrooms, faculty offices, storage of academic equipment and supplies.
2. Research: research laboratories, animal quarters, research equipment rooms, research administrative offices.
3. Administration: academic programming, business management, administrative services.
4. Libraries: stacks, carrels, reading rooms, periodical rooms, library service.
5. Student services: testing and counseling, chapel, student union, auditorium, student health offices, athletics.
6. Auxiliary Enterprises: residence halls, food services, stores operations, laundry.
7. Plant Operations and Institutional Services: warehouses, garages, paint shop, carpentry and mechanical shops, heating plant.
8. Circulatory Space: corridors, lobbies, halls, stairwells, elevators, telephone booths. Most of this space is not assignable.
9. Accessory Space: rest rooms, janitors' closets, custodial storage areas, waiting rooms, maids' closets, mechanical rooms, lounges, social rooms.

Table IV is a detailed study of the present instructional space at Duke University, analyzed according to the uniform reporting procedure of the American Association of Collegiate Registrars and Admissions Officers and others concerned with space analysis.

Table IV

ANALYSIS OF INSTRUCTIONAL SPACE (1961) SHOWING NUMBER OF ROOMS, NUMBER OF STUDENT STATIONS, TOTAL SQUARE FEET AVAILABLE AND AVERAGE NUMBER OF SQUARE FEET PER FULL-TIME STUDENT, BY TYPE OF SPACE, INCLUDING SPACE USED BY THE GRADUATE AND PROFESSIONAL SCHOOLS*

Type of space	*No. of rooms*	*No. of student stations*	*Total sq. ft.*	*No. sq. ft. per full-time student*
Auditoriums	10	2,220	19,923	3.62
Classrooms	137	6,028	92,971	16.88
Seminar Rooms	28	537	11,754	2.13
Teaching Labs	88	1,705	80,362	14.59
Totals	263	10,490	205,010	37.16

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* Excluding Hospital space devoted to care and treatment of patients.

The distribution of instructional space among the several divisions of the University in presented in Table V.

Table V

ANALYSIS OF INSTRUCTIONAL SPACE* AT DUKE UNIVERSITY, BY SCHOOLS AND COLLEGES

(1961)

School	*Full-time enrollment (Fall, 1960)*	*No. of rms. for teaching*	*Total sq. ft.*		*No. of student stas.*	*Av. sq. ft. per stu.*		*No. stu. stas. per stu.*
			Classrooms	*Teach. labs.*		*Classrooms*	*Teach. labs.*	
Undergraduate Colleges and Grad. Arts and Sciences	4,377	205	100,234	66,273	8,270	22.90	15.14	1.89
Divinity	262	10	7,050	....	740	26.53	....	2.82
Forestry	73	4	1,043	2,524	126	14.29	34.56	1.73
Law	194	6	6,392	....	381	32.95	....	1.96
Medicine	312	35	7,309	11,565	786	23.43	37.07	2.52
Nursing	290	3	2,620	....	187	9.03	....	0.64
TOTALS	5508	263	124,648	80,362	10,490	22.63	14.59	1.90

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* Excluding Hospital space devoted to care and treatment of patients.

Statistical measures, especially those attempting to measure broad areas, seldom tell the whole story. These measures become more meaningful when they are viewed in the light of certain conditions obtaining on the Duke campus and when they are compared with the statistics which describe the situation at other universities. To understand the significance of the data in Table V, one must bear in mind that nurses are also taught in space allocated to medicine and to the undergraduate colleges; that a medical school does the majority of its teaching in laboratories with highly specialized requirements; that the single classroom assigned to the Forestry School is considerably larger than its enrollment warrants; that Divinity School teaching space includes a large Chapel of limited instructional use; and that the use of library space by students in the humanities and social sciences (analagous to the use of laboratory space by science students) is not represented. These examples help explain the wide variations, shown in Table V, in the number of student stations per student and the average space per student.

If the data presented in Tables IV and V are compared with similar data for seventy-nine other private institutions, it appears that Duke is well supplied with space for teaching laboratories and poorly supplied with space for general classroom work. Data published by the American Association of Collegiate Registrars and Admissions Officers* place Duke at the 73rd percentile in average square feet of teaching laboratory space per full-time student. Duke has 3.99 more square feet per full-time student than the 50th percentile institutions. On the other hand, these same data place Duke at the 33rd percentile in average square feet of general classroom floor space per full-time student. In order to move to the 50th percentile, an additional 21,040 square feet or 3.82 square feet per student would have to be added to Duke's existing plant.

The extent to which space is used is also important. In this connection, Duke does a somewhat better than average job in utilizing its classroom space and a poorer than average job in utilizing teaching laboratories. Classrooms are used about 48% of the available time; such use classifies Duke above the 70th percentile according to collected data on a hundred private institutions listed in the forenamed publication. In contrast, teaching laboratories are used about 25% of the available time, corresponding to about the 40th percentile group. It should be noted that what appears to be inefficient use of laboratory space is attributable to the highly specialized nature of the laboratories of the professional schools.

Projected Space Needs. As previously mentioned, the tabulated results of the requests received from the various departments and other divisions are not included in this report. However, from a review of the requests it is clear that unilateral requests, especially in instructional areas, have to be reviewed by the proper administrative authority in order to avoid expensive and needless duplication. Basically, the requests are proposals for estimated space needs in the decade ahead; they envisage a careful and continuous development of physical facilities.

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* James I. Doi and Keith L. Scott, *Normative Data on the Utilization of Instructional Space in Colleges and Universities*, published by the American Association of Collegiate Registrars and Admissions Officers, July, 1960.

Botany, Forestry, Law, and Zoology are already involved in building projects; Chemistry, Mathematics, and Physics have proposed new buildings or additions. The first summaries show that, in addition to the space provided by these buildings and additions, 172,868 square feet of instructional area and 155,452 square feet of research area for Arts and Sciences have been requested. Requests for additional space for an expanding Medical Center, for the Business Division of the University, for supporting administrative activities, for general University activities supporting the academic program, and for auxiliary enterprises are being reviewed and summarized. Proportionate growth in all areas must be assumed.

Another aspect of planning for space requirements is that of developing plans for the renovation and use of space to be vacated by units moving into new buildings. This space will be taken into account in studying the requests of various units for additional facilities. The buildings on the main quadrangle of the West Campus are sound structures, which can be converted into space of as good quality as will be provided by new buildings. Space analysis will take into account proposed renovations and assignment of such areas.

Space Inventory and Space Utilization Studies. An accurate and continuing space inventory as well as utilization studies are essential planning tools for University officials charged with the responsibility of space assignment and space planning. Such studies are presently being conducted by the Business Division in preparing an annual indirect cost study. It is recommended that the responsibility for required statistical studies of space and its utilization should be assigned to the Chief Business Officer or to a member of his staff. Close cooperation with both the University's Schedule Committee and Space Allocation Committee is essential.

Needed New Construction. Since the publication in 1959 of the *First Progress Report* of the Long-Range Planning Committee some of the acute space needs outlined therein have been satisfied. Housing for married graduate students has been started, the Woman's College Infirmary is nearly completed, and work on the new Law School Building has begun. The remaining space needs may be divided into three broad categories.

CATEGORY ONE. The needs listed below are those which should be given highest priority.

The University Library. Extension and modernization of the general Library is the most important building requirement. Additional reading and seminar rooms and increased stack space are urgently needed. Upon recommendation of the Long-Range Planning Committee, preliminary plans have been prepared with the aid of library consultants.

The West Campus Heating Plant. Increased demand for heat, arising from new construction, has rendered inadequate the entire heating plant. If central air-conditioning is to be supplied, a cooling plant should be added to this unit.

Category Two. The second category includes, listed in alphabetical order, buildings and additions urgently needed. Planning for them should take into consideration the availability of outside funds.

Arts Center. In connection with the much needed teaching facilities for the departments of Art and Music, there is need for an arts center building, serving not only the departments and students immediately concerned, but also the University as a whole and the community. Such a center could be a most effective instrument in the University's effort to meet its obligation in the encouragement of the arts.

Card Gymnasium. The West Campus Gymnasium needs considerable renovation. Most important is the need for a new swimming pool to supplement the inadequate pool now in use.

Chemistry Building. The present Chemistry Building, built 35 years ago, is inadequate to accommodate a modern chemistry department. The completion of a new Chemistry Building would likewise release much needed space for use of departments in the Humanities and the Social Sciences.

College of Engineering. To meet present and anticipated pressures in the undergraduate program and to meet the needs incident to an expanded graduate program, additional building space will be required.

Divinity School Chapel and Wing. If adequate space can be found for the departments now occupying Gray Building, that building could, after renovation, be made available to the Divinity School, thus taking care of that school's most pressing needs. A new Chapel to replace York Chapel and a new wing, to be built north of Gray

Building, are the further space requirements of the Divinity School.

Mathematics Building. Now housed in the Physics Building, the Mathematics Department urgently needs more adequate space for carrying on its increasing load of teaching and research.

Medical Center. Very little has been added to the teaching space of the Medical Center since the original construction. Necessary encroachments on teaching space have resulted from the expansion of medical research. New teaching space is urgently needed.

Physics Building. The Physics Department, like practically all physics departments throughout the country, must have additional space if it is to maintain and improve its position.

Service Buildings. If improvements in business procedures are to take place, centralized warehouse facilities must be erected. The present inadequate warehouses are in the area set aside for future development of the Medical Center. Furthermore, much needed space in Allen Building and elsewhere could be obtained if functions of purchasing and related areas were housed in the new warehouse.

The Woman's College Gymnasium. Additions to the present gymnasium are required, since the College enrollment has outgrown the present building. Office space and other facilities of the present structure are inadequate.

CATEGORY THREE. The third category of building needs includes important adjuncts to a modern university, but unless special outside funds are available these buildings may have to be postponed until the buildings in the other two categories are completed.

Student Center (East Campus). The condemnation of the Pan-Hellenic House has left sororities without any meeting place except classrooms. Nor are there adequate places on East Campus for other student organizations to conduct their affairs. A center on East Campus would fill this need.

University Center. The life of the University has long suffered from the lack of modern facilities best described as a union or university center. It is in such centers in most modern institutions that space and facilities are provided to serve the community life of the University and its various publics. It has become increasingly necessary for the University to serve more adequately as host to its returning alumni, to visitors attending special conferences, and to other distinguished guests of the institution.

A Faculty Club and University Guest House. Duke is one of the few major universities which does not have a faculty club building. Facilities to accommodate the Faculty Club combined with a University Guest House would add to the general morale of the institution.

Cost of Projected Construction. Buildings in Category One are estimated to cost $5,500,000. The ten building projects in Category Two will cost approximately $21,300,000. The three buildings in Category Three will cost about $5,750,000. Thus, a total expenditure of $32,550,000 for new buildings is projected.

CHAPTER V

The Financial Projections

The *First Progress Report* (June 1959) of the Long-Range Planning Committee contained preliminary budgetary projections through 1968-69. Subsequent developments and current information as to faculty and space needs indicate that these early projections were too modest to carry out the program envisioned. This report contains a more realistic financial projection.

Table VI is presented to indicate the financial activity of Duke University for the period July 1, 1954 to June 30, 1971. For the fiscal years 1954-55 through 1959-60, the actual operating results are shown; for 1960-61, the budget is shown; and for the fiscal years 1961-62 through 1970-71, the estimated revenues and expenditures are indicated. The exhibit refers only to the operating funds of the University and does not include Sponsored Research,* Plant Funds, or other funds, such as scholarships, fellowships and certain balanced operations. Furthermore, the auxiliary enterprises and the operations of Duke Hospital are shown net, rather than gross.

The procedures and assumptions employed in developing the estimates for fiscal years 1961-62 through 1970-71 are discussed in the following comments:

Revenue. Endowment income is projected on the basis of past experience after adjusting for some unusual situations as noted in the footnotes to Table VI.

Gifts and Grants are projected at a greater rate than that shown by past experience, on the assumption that the new Office of Institutional Advancement will produce increased support.

In the calculation of revenue from student fees, it has been assumed that undergraduate enrollment will be held at the present level, and that the anticipated increase in enroll-

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* The past growth of this kind of research support is shown in Figure A, page 3.

Table VI

OPERATING REVENUE AND EXPENDITURES

Fiscal Years Ending June 30, 1955 to 1971

(In Thousands of Dollars)

Classification	*Actual* 1954-55	*Actual* 1955-56	*Actual* 1956-57	*Actual* 1957-58	*Actual* 1958-59	*Actual* 1959-60	*Budget* 1960-61
REVENUE							
Educational and General:							
Endowment	2,997	3,580	4,177	4,758	5,119	6,286*	5,913
Gifts and grants	630	674	622	690	690	838	801
Student Fees	2,207	2,625	2,661	3,480	3,813	3,984	4,283
Other Revenue	322	345	404	563	735	867	746
Total	6,156	7,224	7,864	9,491	10,357	11,975	11,743
Auxiliary Enterprises							
Net Income	280	318	333	269	258	293	325
Total Revenue	6,436	7,542	8,197	9,760	10,615	12,268	12,068
EXPENDITURES							
Educational and General							
Adm. and General	1,312	1,650	2,134	2,699	2,215	3,447	2,638
Instruction	3,971	4,256	4,516	5,113	5,887	6,480	7,238
General Libraries	345	378	411	473	499	576	573
Physical Plant	800	1,175	973	946	1,694	1,353	1,166
Total	6,428	7,459	8,034	9,231	10,295	11,856	11,615
Related Activities							
Hospital—Net Cost	135	139	301	600	57	319	296
Other	53	56	75	66	85	84	90
Total Expenditures	6,616	7,654	8,410	9,897	10,437	12,259	12,001
Gain or (Loss)	(180)	(112)	(213)	(137)	178	9	67

* Extra non-recurring income from investments produced the unusual increment in revenue noted for this year.

ment of the Graduate School of Arts and Sciences will be realized by 1964-65. The recommendation in the *First Progress Report* for tuition increases of $200 in September of 1963 and $200 in September of 1967 has been incorporated in the projections. These increases should add $900,000 in 1963 and $1,000,000 in 1967.

With regard to other revenue, the trend lines of the past have been used to establish estimates for the future, but the projections have been made from a higher base to reflect the increased indirect cost allowances on contracts and grants.

The net revenue of the auxiliary enterprises has been estimated to reflect increases which are contemplated in room and board charges in order to maintain this income between $250,000 and $300,000 per year.

Expenditures. By combining the adjustments needed to make substantial salary increases with the realistic growth

OPERATING REVENUE AND EXPENDITURES
(cont'd)

Estimated 1961-62	*Estimated* 1962-63	*Estimated* 1963-64	*Estimated* 1964-65	*Estimated* 1965-66	*Estimated* 1966-67	*Estimated* 1967-68	*Estimated* 1968-69	*Estimated* 1969-70	*Estimated* 1970-71
6,041**	6,390	6 750	7,200	7,600	8,000	8,400	8,800	9,250	9,700
782	900	1,000	1,000	1,100	1,200	1,200	1,300	1,400	1,400
5,253	4,820	5,750	5,800	5,800	5,800	6,800	6,800	6,800	6,800
921	975	1,000	1,100	1,200	1,300	1,300	1,400	1,400	1,500
12,997	13,085	14,500	15,100	15,700	16,300	17,700	18,300	18,850	19,400
300	275	325	300	275	250	325	300	275	250
13,297	13,360	14,825	15,400	15,975	16,550	18,025	18,600	19,125	19,650
2,874	3,105	3,346	3,561	3,792	4,001	4,208	4,384	4,569	4,743
8,104	8,996	9,914	10,746	11,650	12,515	13,340	14,085	14,876	15,582
636	700	766	826	891	952	1,011	1,064	1,119	1,169
1,283	1,399	1,521	1,629	1,747	1,856	1,962	2,055	2,152	2,242
12,897	14,200	15,547	16,762	18,080	19,324	20,521	21,588	22,716	23,736
278	278	278	278	278	278	278	278	278	278
99	109	118	127	136	144	153	160	168	175
13,274	14,587	15,943	17,167	18,494	19,746	20,952	22,026	23,162	24,189
23	(1,227)	(1,118)	(1,767)	(2,519)	(3,196)	(2,927)	(3,426)	(4,037)	(4,539)

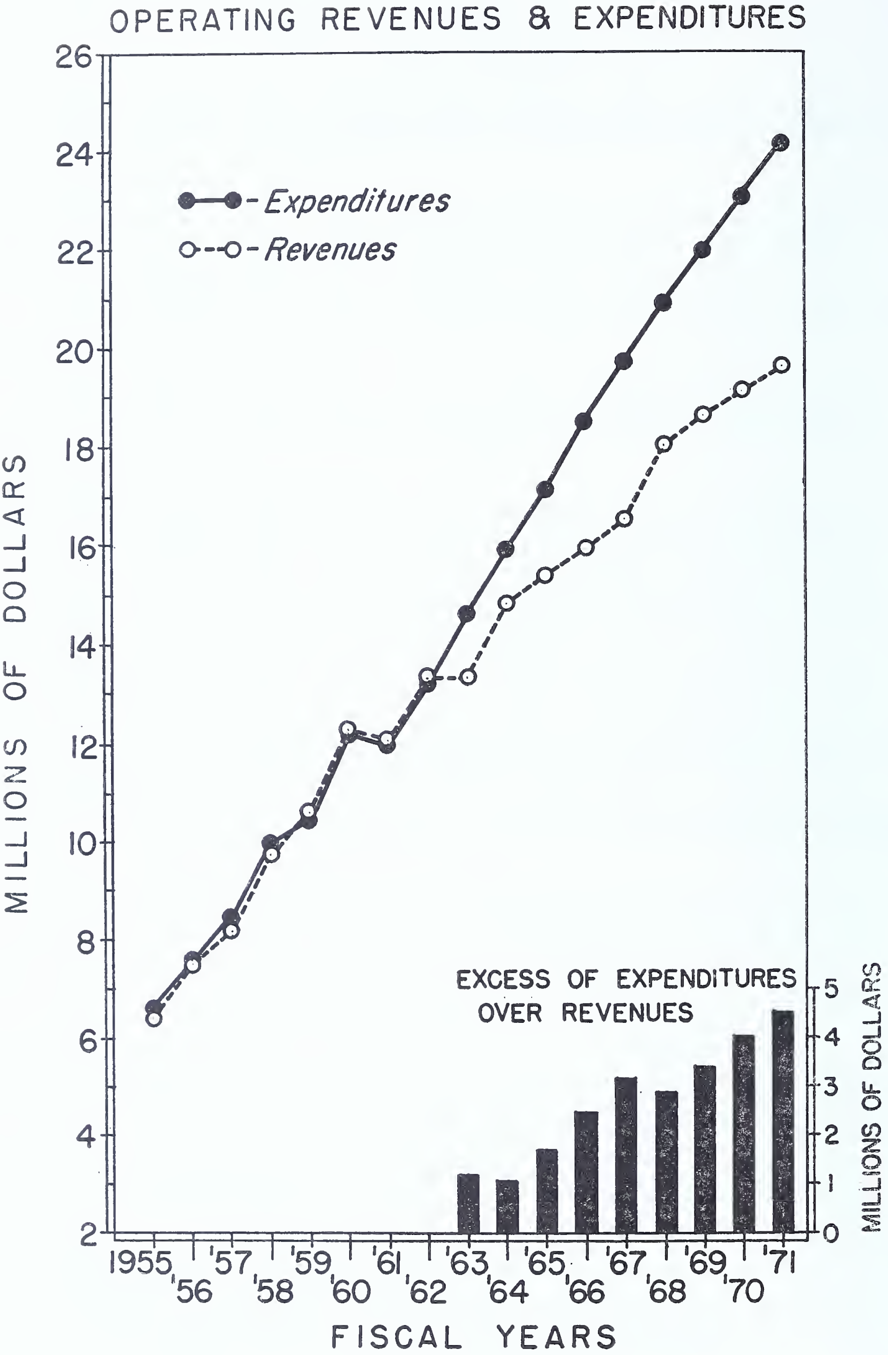
unds previously functioning as endowment were allocated to a building program, hich caused income to remain smaller than noted in the other figures.

factor noted in Chapter III, the following percentage increments have been established and applied to the salary and wage base of each classification:

1961-62	13%
1962-63	12%
1963-64	11%
1964-65	9%
1965-66	9%
1966-67	8%
1967-68	7%
1968-69	6%
1969-70	6%
1970-71	5%

This schedule of increments would produce approximately a 40 percent increase in expenditures for additional faculty and staff by 1969, using 1960-61 as a reference year.

FIGURE C


OPERATING REVENUES & EXPENDITURES
- Expenditures
- Revenues
MILLIONS OF DOLLARS
26
24
22
20
18
16
14
12
10
8
6
4
2
EXCESS OF EXPENDITURES OVER REVENUES
MILLIONS OF DOLLARS
5
4
3
2
1
0
1955
'56
'57
'58
'59
'60
'61
'62
'63
'64
'65
'66
'67
'68
'69
'70
'71
FISCAL YEARS

Increases in expenditures other than salaries and wages have been estimated on the following basis:

1961-62	7%
1962-63	6%
1963-64	6%
1964-65	5%
1965-66	5%
1966-67	4%
1967-68	4%
1968-69	3%
1969-70	3%
1970-71	3%

The net cost of Hospital operations has been projected at a constant figure of $278,000 per year.

A study of Table VI and Figure C indicates during the decade ahead a deficit operation which will approximate $4,500,000 for the fiscal year 1971.

If the University is to progress as planned during the coming decade, new revenue must be found. The earliest projected deficit (approximately $1,200,000) appears in 1962-63, the year before the proposed tuition increase. There is, therefore, immediate need for additional income equivalent to the return from $25,000,000 of added endowment. The projected deficit for the fiscal year 1971 reveals the need for extra income equivalent to the return from $100,000,000 of new endowment.

The expenditures have been shown in Table VI by function rather than by object classifications. In Table VII the figures are rearranged to show the distribution between salaries and wages as one category and other expenses as another, the latter including the projected net cost of the Hospital operations.

Table VII

PROJECTED EXPENDITURES BY OBJECT CLASSIFICATIONS

1961-62 through 1970-71

(In thousands of dollars)

	Salaries & Wages	*Expense*	*Hospital Net Cost*	*Total*
1961-62	8,885	4,111	278	13,274
1962-63	9,951	4,358	278	14,587
1963-64	11,046	4,619	278	15,943
1964-65	12,039	4 850	278	17,167
1965-66	13,123	5,093	278	18,494
1966-67	14,173	5,295	278	19,746
1967-68	15,165	5,509	278	20,952
1968-69	16,075	5,673	278	22,026
1969-70	17,040	5,844	278	23,162
1970-71	17,892	6,019	278	24,189

A comparison of the budget for 1960-61 with the estimates for 1970-71 is given below to indicate the relationship between the various functions:

Table VIII

COMPARISON OF EDUCATIONAL AND GENERAL REVENUE AND EXPENDITURES FOR THE FISCAL YEARS

1960-61 and 1970-71

(In thousands of dollars)

	1960-61		*1970-71**	
	Amount	*Percent*	*Amount*	*Percent*
Revenue				
Endowment	5,913	50.35	9,700	50.00
Gifts and Grants	801	6.82	1,400	7.22
Student Fees	4,283	36.47	6,800	35.05
Other	746	6.36	1,500	7.73
Total	11,743	100.00	19,400	100.00
Expenditures				
Administration & General	2,638	22.71	4,743	19.99
Instruction	7,238	62.32	15,582	65.65
General Libraries	573	4.93	1,169	4.92
Physical Plant	1,166	10.04	2,242	9.44
Total	11,615	100.00	23,736	100.00

It is of some interest to compare the data in Table VIII with that of other private institutions, particularly as regards the percentage distribution of sources of revenue and object of expenditures in the several classifications shown in the table. Collected data for institutions comparable to Duke University are not available. However, there are roughly comparable data** for all private four-year institutions in the United States for the year 1957-58.

Since the object classifications in the national data were not in exact correspondence with that in Table VIII, it was necessary to regroup and select figures from the national data which most nearly represented the groupings in Table VIII. Table IX gives in summary form the national data obtained as noted above.

It is evident from a comparison of the percentage data in Tables VIII and IX that the distribution for Duke University

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* It is recognized that the distribution of revenue in 1970-71 may be changed somewhat by the amount and nature of funds received in addition to those projected in this table.

** *Financial Statistics of Institutions of Higher Education for 1957-58,* U. S. Office of Education, Washington, D. C. Circular OE52001 Table 3, Sept. 1960.

Table IX

CURRENT FUND REVENUE AND EXPENDITURES FOR PRIVATE FOUR-YEAR INSTITUTIONS OF HIGHER EDUCATION FOR THE YEAR 1957-58

(In Millions of Dollars)

	Revenue			*Expenditures*	
	Amount	*Percentage*		*Amount*	*Percentage*
Endowment	164.0	15.1	Adminis. & Gen.	246.3	22.8
Gifts & Grants	245.7	22.6	Instruction*	623.4	57.6
Student Fees	632.7	58.4	Libraries	48.1	4.5
Other	42.3	3.9	Physical Plant	163.3	15.1
Total	1084.7	100.0	Total	1081.1	100.0

differs considerably from the national distribution. Reasons for this are the broad spectrum of types of institutions included in the totals for the national case, the fact that Duke University is particularly fortunate in its present income from endowment and that relatively few institutions obtain such a small proportion of their income from student fees. It will be noted that projections for 1970-71 show only a slightly lower fraction of total revenue from student fees than was true for 1960-61. It seems likely that this percentage will become even smaller than projected as new sources of income develop in other categories.

This chapter has been devoted entirely to projected operating revenue and expenses; for this reason, the tabular data and comments refer only to this area of future financial requirements of the University. In concluding this section, it should be pointed out that the progress anticipated can be made only if adequate space is provided. Chapter IV presents in detail the space requirements of the University. Nevertheless, it may be well to repeat that, exclusive of all additions to the Medical Center except the teaching space mentioned on page 27, an estimated $32,550,000 will be required over the next decade to furnish adequate space for the programs on which operating expenditures are projected. In most areas, Faculty and program development cannot take place unless they are accompanied by parallel development of space and facilities.

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* This classification includes extension, public service, and a portion of student aid.

CHAPTER VI

Long-Range Planning for the Medical Center

This chapter represents a first statement on long-range planning for the Medical Center. A comprehensive statement will be published in the summer of 1961. It will be based on thorough studies now being carried out by two competent consultant groups, of which more will be said later. It will be reviewed carefully by the authorities responsible for the long-range planning of the University as a whole.

Two basic decisions had to be made by the University Trustees before responsible planning could be undertaken by either the consultants or the Medical School Faculty. The first of these decisions was to approve the concept of the Green Belt, which delineated the physical boundaries of the existing Gothic structures in the Medical Center. The second decision of the Board of Trustees demarcated areas of University land into which expansion of the Medical Center might develop.

Defining the Role of the Medical Center. Long before these decisions were taken, the Medical Faculty had arrived, in continuing informal discussions, at two main tenets, which remain basic to its thinking. First, the Medical Center is very much a part of the total University; and second, the Medical Center must assume a fair share of the increasing social responsibilities related to the health of the people of this region and of the country at large.

The Medical School Faculty has reaffirmed its conviction that it functions in an environment of scholarship which in many respects cannot be and should not be distinguished from that of the Graduate School of Arts and Sciences. It is an environment where graduate students are trained, where biological truths are sought in an atmosphere of free inquiry, where the new and the difficult are commonplace. The Medical School Faculty believes that cooperative enterprises between units of the Medical School and other units of the University redound to the benefit of both, that the study and practice of Medicine benefit from such cooperation, and that an enlargement of the areas of interdisciplinary cooperation is desirable. Part of the prestige of the Duke Medical Center can be attributed to its integrated use of the scholarly resources of the whole University; it is reasonable to believe its future standing will depend in part on the continued use of these resources.

Some concrete examples of the kind of intra-University projects referred to above are: the Gerontology research program, the Nursing Council, and the proposed Master's degree program in Hospital Administration. These three examples illustrate different possibilities of fruitful cooperation. The research program in Gerontology brings to bear on a categorical problem of significance the specialized knowledge and research skills of eight departments in and out of the Medical School. The Nursing School Council assembles in one advisory group representatives from the Medical Center and from other divisions of the University. The composition of the Council reflects the broadly-based character of Nursing education at Duke. The Master's degree program in Hospital Administration is an example of useful cooperation between the Medical School and the Graduate School of Arts and Sciences.

New developments in the biological sciences and new techniques of training investigators are always of actual or potential interest to Medicine. The growth of disciplines such as bionomics, biophysics, biological psychology, and genetics, and the need of certifying culture and ethics as part of the expression of science justify deliberate review and probable extension of the areas of Medical Center-University cooperation.

The relations of a university medical center with society are becoming more complex; these relations must change, because society has changed. The research accomplishments of the recent past have greatly stimulated public interest in all matters related to physical and mental health. Congress has responded to this interest by appropriating increased funds for the conduct of research and for the construction of hospitals and research facilities; it has introduced bills for the construction and support of medical teaching facilities. An expanding population requires the training of more physicians. If more physicians are to be trained, more teachers of Medicine must be produced. The new physicians must be assured of a continuing postgraduate education. Students and teachers at all levels in the Medical School must become knowledgeable in the complex sociological, political, and economic patterns of the outside world and familiar with the impact of such patterns on the medicine they practice. Just as medical research has furnished some alleviation of ill health, so now medical care research must furnish the ill patient with relief in ways that are efficient, flexible, and—it is hoped—less expensive.

The considerations listed above indicate to what extent the responsibilities of medical centers are increasing. The Duke Medical Center is firm in its intention to accept on a selective basis a fair share of these responsibilities. One of the responsibilities it accepts is that of preparing teachers of Medicine. It has been active in this field for slightly more than thirty years and is now ranked eleventh among eighty-five medical schools in the production of teachers of Medicine.*

Another responsibility which the Duke Medical Center has always accepted and will continue to accept is the responsibility for research. Both its preclinical and its clinical departments are very active and have won substantial outside support. One example which might be mentioned is that of its unique and very successful Clinical Investigators' program. The first stage of the program focused on the cell; the second stage will study the biology of the organ; the third stage will extend the concern to total man. To serve this program, a Clinical Research Center of fifteen beds is to be constructed this summer. As soon as possible, this Center should be expanded to include sixty beds. This expansion is now in application to the National Institutes of Health.

Planning to Date. The preceding pages have attempted to state and illustrate the basic tenets which the Medical School Faculty thinks should guide the planning of the Medical Center. Although the planning is still far from complete, it is possible to indicate four steps which have already been taken. The first has been a continuing effort to add to the Medical School Faculty men and women qualified to implement the kind of programs referred to earlier in this chapter, imaginative programs concerned both with the University and with the outside world. Considerable progress has been made in the recruitment of this kind of faculty.

An essential second step in long-range planning for the Medical Center was taken in the spring of 1960. A recommendation was forwarded to the Trustees that the number of first-year medical students should be raised from seventy-six to one hundred. The recommendation was approved, subject to the development of adequate physical accommodations. Trustee approval of this increase in enrollment laid the necessary foundation not only for physical structure planning, but also for capital fund planning; the Trustees' action qualified the Medical Center to match government financial resources within the context of total University resources.

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* See *The Journal of Medical Education,* XXXVI (February 1961), 179.

The third step in long-range planning for the Medical Center was the appointment, with Trustee approval, of two consultant groups competent in the field of medical center development. The management consultant firm of Booz, Allen and Hamilton, of Chicago, and the architectural firm of Perkins, Will and Taylor, also of Chicago, are now assembling architectural and engineering data, general statistical and work-load data, staffing and hospital-clinic data, and forecasts of space requirements. These groups are analyzing the educational and operational objectives, and the purposes and policies of the Medical Center. Their analyses will be of primary importance to the well-planned development of the Duke Medical Center. Their report will be forwarded to the University administration on or about June 1, 1961.

The fourth step in long-range planning was the initiation of a program cost analysis of existing programs, i.e., those related to research, teaching, investigator training, paramedical services, patient care, and medical care research. A cost analysis has become particularly urgent because of increased government funding of medical programs in recent years. Through such a cost analysis, the responsibilities of the University, the community, and the government may be defined with some accuracy and projected as required. It is expected that this analysis will be available on or about June 1, 1961.

Directions of Future Development. Although steps one, three, and four have not been completed, it is possible to indicate some of the probable directions of future developments in the Medical Center. Table X makes a good starting point. Based on program analysis to date, it provides a coherent picture of existing and possible Medical Center functions and associated activities. It is not intended as a fixed pattern for the future development of the Duke Medical Center. Some of the functions and activities included in the table are already flourishing; some cannot operate at full efficiency because of inadequate housing; others belong in the category of possibilities worthy of study.

Table X

CLASSIFICATION OF MEDICAL CENTER FUNCTIONS AND ASSOCIATED ACTIVITIES

I. Education and Research.
  A. Basic Research Laboratory
  B. Clinical or Applied or Transitional Research Laboratory
  C. Clinical Research Unit (15 beds)
  D. Gerontology Center
  E. Institute of Human Biology (45 beds)
  F. Graduate or Intra-University Biological Research Center
    1. Graduate education
    2. Investigator training programs
    3. Broad university disciplines—biophysics, genetics, etc.
  G. Biocommunication Center
  H. Rehabilitation
  I. Patient Care Research
  J. Vivarium

II. Primary Medical Education
  A. Medical School
  B. Nursing School
  C. Paramedical Education
  D. Postgraduate and Community Hospital Education

III. Hospital Patient Services
  A. Teaching Hospital
  B. Special Care Units
    1. Psychiatric
    2. Pediatric
    3. Student health
    4. The chronically ill

IV. Ambulant Patient Services
  A. Diagnostic and Treatment Center
  B. Out-patient and Day Care Clinics
  C. Private Diagnostic Clinics

V. Administration
  A. Medical Center Administration
    1. Provost and Dean
    2. Personnel and budget
    3. Division of research and program grants
  B. Student Activities
  C. Auditorium
  D. Bioscience Library
  E. Instrument Shop, Purchasing and Maintenance
  F. Food Service
  G. Chapel
  H. Ancillary Units, Bank, Barber Shop, etc.

VI. Housing
  A. Medical, Nursing and Paramedical Centers
  B. Patient Family

VII. Affiliated Units
  A. VA Hospital
  B. Cerebral Palsy Hospital
  C. Senior Citizens Residence Project
  D. Child Guidance Clinic
  E. Atomic Energy Commission Units

Some of the priorities in a twenty-year development program for the Medical Center seem clear. Of immediate importance is the construction of a teaching hospital and of a complex to include medical school, basic research, vivarium, and library. This complex will extend the teaching-research growth of the Medical Center in a productive fashion; facilities for teaching patient care will allow overdue modernization of existing hospital facilities and will take care of growing responsibilities in the field of the care of patients afflicted with the kind of diseases that require the highly specialized skills, services, and equipment commonly available only in university hospitals.

Financial Resources. Data from past experience are invaluable as the Medical Center seeks financial resources for its future development. Table XI shows in broad terms the sources of funds for existing structures and for those under construction.

Table XI

SOURCES OF BUILDING FUNDS

Year and Building	*Source*	*Cost*
1930 Original Hospital and Medical School	Duke Endowment	$4,444,500
1932 Baker House, Nurses	Duke Endowment	327,040
1940 Private Patients Building	Duke University	250,000
	Duke Endowment	264,225
1943 Supplementary Nurses Home	Federal Agency	63 618
	Duke University	79,470
1946 Central Surgical Supply	Duke Endowment	110,000
1947 Laundry	Duke Endowment	132,000
1951 Hanes House—Nurses	Mrs. F. M. Hanes	473,760
	N.C. Med. Care Comm.	372,240
	Duke University	60,000
1956 Hematology Laboratory	N.C. Med. Care Comm.	35,000
	Dept. Funds—Surgery	2,565
	Hanes Fund	35,000

1957		
Hospital Addition Out-Patient Care	Duke Endowment	1,000,000
	Med. Center Bldg. Fund (from private clinics)	1,851,896
	N.C. Med. Care Comm.	480 000
	Private Grants	135,353
	Dept. Funds—Surgery	664,071
	Balance to be paid by Med. Center Bldg. Fund	488,372
1946-59		
Bell Building Research Original Unit	Rockefeller Foundation	10,000
	Dept. Funds—Medicine	10,000
	Dept. Funds—Surgery	10,000
	Dorothy Beard Research Fund	40,000
	Duke Endowment	125,000
Addition No. 1	Dept. Funds—Medicine & Surgery	175,317
Addition No. 2*	U.S. Public Health	243,605
	Med. School Faculty	125,000
Addition No. 3*	National Institutes of Health	105 000
	Hanes Fund	60,000
	Med. School Faculty	45,000
Addition No. 4	Duke University	87,000
	Markle Foundation	250,000
	National Institutes of Health	204,250
1960		
Radiation Therapy Cobalt Unit	Duke Endowment	177,850
	Dept. Funds—Pediatrics	2,540
	N.C. Med. Care Comm.	192,333
1961		
Howland Ward Renovation	Duke Endowment—Hospital Section	219,750
	Duke University	95,000
	N.C. Med. Care Comm.	137,500
	Dept. Funds—Pediatrics	50,000
	Doris Duke Foundation	17,750
Gerontology	National Institutes of Health	388,000
	Duke University	634,000
	R. J. Reynolds Co.	50,000
Diag. and Treat. Center	N.C. Med. Care Comm.	605,000
	Clinical Dept. Funds	495,000
Clinical Research Building	Clinical Dept. Funds	765,000
	National Institutes of Health	765,000

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* Does not include $80,000 for air-conditioning paid from a variety of sources.

Table XI shows the continuing generous support of the Medical Center by Duke University, the Medical School Faculty, the Duke Endowment, and various government agencies. It is clear that the support of government agencies is increasing.

Table XII

SOURCES OF OPERATING FUNDS 1959-60
Medical School Budget

DEPARTMENT	*University Funds*	*Grants* & Departmental Funds*	*Total*
Preclinical			
Anatomy	$ 106,505	$ 161,964	$ 268,469
Biochemistry	116,524	499,706	616,230
Microbiology	128,869	105,343	234,212
Pathology	142,623	53,215**	196,938
Physiology	111,776	58,738**	170,514
TOTAL PRE-CLINICAL	$ 606,297	$ 880,066	$1,486,363
Clinical			
Medicine	$ 132,048	$ 759,251	$ 891,299
Obstetrics & Gyn.	70,666	32,752	103,418
Pediatrics	89,919	116,025	205,944
Psychiatry	168,956	599,844	768,800
Surgery	131,692	798,046	929,738
Med. Center Dev. Fund from 5 Clinical Depts.		203,000	203,000
TOTAL—CLINICAL	$ 593,281	$2,508,918	$3,102,199
TOTAL—CLINICAL AND PRECLINICAL	$1,199,578	$3,388,984	$4,588,562
General			
Adminstration	$ 149,059		$ 149,059
Experimental Surgery	44,709		44,709
Library	45,264		45,264
TOTAL—GENERAL	$ 239,032		$ 239,032
GRAND TOTAL	$1,438,610	$3,388,984	$4,827,594

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* Excluding overhead.

** The reorganized Departments of Pathology and Physiology have received or have under application very substantial additional support beginning in 1960-61. The amount for Pathology is $1,000,000 (over a five-year period); the amount for Physiology is $413,000 (over a three-year period).

Financial Responsibilities. Early data from the program cost analysis help to define the responsibilities of the University as a whole, the departments of the Medical School, and the government in the support of a rapidly-developing Medical Center. How these responsibilities were distributed for 1959-60 is illustrated in the Budget presented in Table XII. The very heavy contributions from clinical departmental funds and government granting agencies merit comparison with the fiscal responsibilities accepted by the University. The proper division of financial responsibility for the support of a developing Medical Center in a university setting represents a vital element in long-range planning. It is a subject that continues to receive close attention.

The preceding pages afford as complete a picture of planning for the Medical Center as is practicable at this time. As previously stated, the consultants' reports and the program cost analysis will be available on or about June 1, 1961. At this time, the Medical Center will be in a strong position to define its role in the foreseeable future. This role cannot be all-inclusive; it will give major attention to medical teaching, to patient care, to biological research, and to collaboration in appropriate intra-University projects.

CHAPTER VII

The Work of the Subcommittees

The work of the subcommittees constitutes most of this year's planning activity not recorded in the preceding chapters. This chapter summarizes that activity and lists the committees for 1960-61. Some of these committees functioned for only part of the year; others are still at work. It is fitting to state here that all have given generously of their time and have made a significant contribution to the advancement of the University.

The University Arts Center. The Subcommittee charged with the responsibility of studying a possible University Arts Center has brought to the campus a distinguished outside consultant, visited arts centers on other campuses, and submitted three detailed and informative reports in April, 1958; December, 1959; and November, 1960. In the *First Progress Report,* the University Arts Center was listed among buildings which should be constructed during the next decade. In this report, it has been classified among the buildings urgently needed.

The Duke Press. The Subcommittee on Planning for the Duke Press submitted in December, 1958, a substantial report, which contained helpful statements on the functions of the Press, the number and nature of its publications of books and journals, its financial situation, and its needs in space and personnel. In the fall of 1960, it was invited to continue its studies if it believed there were matters deserving attention which it did not treat in its first report.

The Dormitories on the West Campus. In the late winter and early spring of 1960, the Subcommittee on the Undergraduate Colleges submitted four major reports on the following topics: the curriculum, teaching and some factors affecting it, admissions, and the West Campus dormitory situation. In June of 1960, the Subcommittee turned in reports on athletics at Duke University and on other extra-curricular activities. The *Second Progress Report* borrowed heavily from the first three reports mentioned above.

In the fall of the current academic year, the Planning Committee gave preliminary consideration to the report on the West Campus dormitory situation. This report suggested a plan for moving toward a house system. The Planning Committee recommended to the President that preliminary floor plans be prepared for one unit in a possible three-unit dormitory for the freshman class, to be designed on the house system; that the academic administration of Trinity College be given an opportunity to participate in the preparation of the plans; and that these plans be submitted to the Planning Committee for suggestions and comments before bids are invited. The Committee further recommended that an outside firm of consultants be employed to advise on remodelling the present West Campus dormitories. President Hart reported at a later meeting that he had put these recommendations before the Executive Committee of the Trustees.

Foreign Student Programs. In October, 1959, the Subcommittee on Foreign Student Programs turned in a useful report containing several proposals which were acted upon in the fall. On the basis of these proposals, the Planning Committee recommended to the President that he appoint a faculty-administrative committee to consider the questions of additional fellowships, the English course in American Civilization for foreign students, and appropriate copy for the Bulletins.

The Graduate School of Arts and Sciences. In December, 1960, the Subcommittee on Matters Related to the Graduate School submitted a long and well-documented report which furnished the basis for fruitful discussion in a joint meeting of that Committee, the Executive Committee of the Graduate Faculty, and the Planning Committee. Some of the recommendations already recorded in this document stem from those joint discussions. The report of the Subcommittee presents a stimulating point of view and offers numerous suggestions not yet alluded to in these pages. Among them may be mentioned: housing for married graduate students, better methods of recruitment and placement of graduate students, travelling fellowships, and the reorganization of the Graduate Council and of its Executive Committee. Implementation of these recommendations is under way.

The Humanities. The Subcommittee on the Humanities submitted a report in May, 1959 and a supplementary report in January, 1960. These reports present a number of proposals designed to strengthen the Humanities at Duke. The most far-reaching proposal is the recommendation to establish a Humanities Council. The Planning Committee submitted this recommendation to the President, who has appointed such a Council. To the Council the Planning Committee has referred for study a proposal to establish an Institute for Contemporary Literature and a proposal to institute a serial publication to be called *Duke University Studies in Literature* (or *in the Humanities*).

The Library. The University Librarian aided by his own staff, by the Library Council, and by the Subcommittee on Research Libraries submitted in January, 1959, a well-documented report on the General Library. On the basis of its presentation, the Planning Committee transmitted to the President a statement of the pressing needs of the University Library and urged that immediate steps be taken to complete definitive plans for the extension and modernization of the Library. It recommended that the construction of such extension and modernization be given the highest financial priority; it recommended that a Subcommittee of the Library Council be created to assist the Librarian and the Council with the analysis and completion of suitable plans; and it appropriated funds to the Librarian to pay two outside consultants to advise him in the development of these plans.

At a later meeting, President Hart reported that he had placed the recommendations on the enlargement and modernization of the Library before the Executive Committee of the Trustees.

Linguistics. The Subcommittee on Linguistics reported in May, 1960. The Planning Committee recommended to President Hart that he give sympathetic consideration to implementing the recommendations of the Subcommittee, especially those concerned with the formation of an interdepartmental committee on linguistics and with the cross-listing in the bulletins of all courses related to linguistics. Such a committee has been appointed.

Religion. The Subcommittee in the Areas of Religion reported in August, 1959. In response to its proposals, the former Undergraduate Department of Religion and the former Graduate Department of Religion were integrated into a single Department of Religion, and a Policy Committee was created to coordinate in the area of graduate studies the work of the Department of Religion and of the Divinity School.

Science and Mathematics. In February, 1959, the Subcommittee on Science and Mathematics reported on its survey of existing and possible interdepartmental programs in Science and Mathematics. Among the areas of possible interdepartmental programs, the Subcommittee chose for special attention three in which Duke is beginning to be active or has the potential to become so. These areas are: Biophysics, Microbiology, and Biological Psychology. Following the recommendation of the Subcommittee, the Planning Committee approved the establishment of a program of graduate studies in Microbiology. Such a program is now listed in the *Bulletin of the Graduate School of Arts and Sciences.* The Committee also approved the appointment of subcommittees in Biological Psychology and in Biophysics. The latter submitted a report in January of 1961.

Social Sciences. The Planning Committee recommended to the President that he give sympathetic consideration to the following proposals offered by the Subcommittee on the Social Sciences in its report of February, 1960: (1) that he appoint an interdepartmental committee on the Social Sciences, and (2) that he appoint a committee representing all segments of the University with a stake in statistical operations to study the needs in this area and recommend plans for their implementation. It was specifically recommended that the committee on statistics include a representative from the Department of Mathematics.

The Planning Committee agreed to inform the Dean of the Graduate School that the Subcommittee on Social Sciences has recommended that a "certificate of attendance" be awarded to certain foreign students. This proposal was believed to merit the attention of the Executive Committee of the Graduate Faculty.

President Hart announced in November appointment of the two committees mentioned above.

Matters Related to the Woman's College and the East Campus. At its first meeting in September, 1960, the Planning Committee recommended to the President that a plan of development be made for the East Campus, its buildings and other facilities, similar to that already prepared for the West Campus. This recommendation was accepted, and landscape architects (the Olmsted Brothers) are actively developing such a plan.

The Planning Committee decided to appoint a new subcommittee on matters related to the Woman's College and the East Campus to survey and report on dormitories, athletic and social facilities, and other related matters. The Planning Committee expressed a desire that this Subcommittee coordinate appropriate aspects of its work with the physical survey of the East Campus undertaken by the Olmsted Brothers.

The Subcommittee has been appointed and is very active. It has already submitted three substantial reports (February, 1961; April, 1961, May, 1961). These reports have contributed significantly to the wise development of the plans for the East Campus being drawn by the Olmsted Brothers. The Subcommittee is continuing its work.

The Planning Committee and its Subcommittees. The following is the complete roster of the Planning Committee and all the Subcommittees which were in existence during all or part of 1960-61:

The University Committee on Long-Range Planning, 1960-61

Joseph E. Markee, *Chairman pro tem*
R. Taylor Cole
Frank T. de Vyver
G. C. Henricksen
Marcus E. Hobbs
Walter M. Nielsen
Charles E. Ward
Richard L. Predmore, *Executive Secretary**

Committee on the Humanities

Professor Gifford Davis
Professor Earl G. Mueller
Professor Bernard Peach
Professor Robert S. Rogers
Professor Arlin Turner, *Chairman*

Committee on an Institute for Contemporary Literature

Professor Thomas H. Cordle
Professor S. K. Heninger, Jr.
Professor Herman Salinger
Professor Lionel Stevenson, *Chairman*

Committee on the Social Sciences

Professor Ralph J. D. Braibanti
Professor I. B. Holley, Jr.
Professor John C. McKinney
Professor J. J. Spengler, *Chairman*
Dean Marcus E. Hobbs, *ex officio*

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* Paul H. Clyde served as Executive Secretary until he resigned from the University on February 1, 1961.

*Subcommittee on the Teaching of Statistics**

Professor Jack W. Brehm
Professor C. Alan Boneau
Professor Charles E. Ferguson
Professor W. Scott Gehman
Professor Frank A. Hanna
Professor Henry Weitz
Professor Joel Smith, *Chairman*

Committee on Science and Mathematics

Professor William D. Billings
Professor Francis G. Dressel
Professor Gregory A. Kimble
Professor Robert M. Williamson
Professor Jacques C. Poirier (until December, 1960)
Professor Charles K. Bradsher (from December, 1960)
Professor John R. Gregg, *Chairman*

*Subcommittee on Matters Related to Biological Psychology***

Professor Irving Diamond
Professor Norman Guttman
Professor Peter H. Klopfer, *Chairman*

Subcommittee on Matters Related to Biophysics†

Professor Walter Gordy
Professor Montrose J. Moses
Professor D. J. Fluke, *Chairman*

Committee on Reesarch Libraries††

Professor William B. Hamilton
Professor Benjamin E. Powell, *Chairman*

Committee on Planning for the Duke Press‡

Mr. Ashbel G. Brice
Mr. A. S. Brower
Professor Clarence Gohdes
Professor Calvin B. Hoover
Professor John R. Alden, *Chairman*

Committee on Matters Related to the Graduate School‡‡

Professor John R. Gregg
Professor Harold W. Lewis
Professor J. J. Spengler
Professor Arlin Turner
Professor John Tate Lanning, *Chairman*
Dean Allan M. Cartter, *ex officio*

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* The Committee on the Teaching of Statistics reported to the Committee on the Social Sciences.

** The Committee on Matters Related to Biological Psychology reported to the Committee on Science and Mathematics.

† The Committee on Matters Relatd to Biophysics reported to the Committee on Science and Mathematics.

†† The Committee on Research Libraries reported to th Duke University Library Council.

‡ The Committee on Planning for the Duke Press reported to the Board of Duke University Press.

‡‡ The Committee on Matters Related to the Graduate School reported to the Executive Committee of the Graduate Faculty.

Committee on the Undergraduate Colleges

Professor Lewis E. Anderson
Professor Frances C. Brown
Dean Ellen Huckabee
Dean Barney L. Jones
Professor Edward K. Kraybill
Professor Charles E. Ward
Professor Harold T. Parker, *Chairman*

Committee on a University Arts Center

Professor Waldo Beach
Professor Allan H. Bone
Dean R. Florence Brinkley
Professor Sidney D. Markman
Professor Julia W. Mueller
Professor Ransom R. Patrick
Professor Kenneth J. Reardon
Professor Richard L. Watson, Jr., *Chairman*

Committee on Foreign Student Programs

Professor Francis E. Bowman
Professor John M. Fein
Professor Robert S. Smith
Professor Clarence Gohdes, *Chairman*

Committee in the Areas of Religion

Professor Waldo Beach
Dean Robert E. Cushman
Dean Barney L. Jones
Professor Thomas A. Langford, *pro tem* (for Professor James L. Price, Jr.)
Professor H. Shelton Smith, *Chairman*

Committee on Linguistics

Professor Bronislas Jezierski
Professor Richard K. Seymour
Professor Richard L. Predmore, *ex officio*

Committee on Matters Related to the Woman's College and the East Campus (authorized September, 1960)

Professor Elizabeth G. Bookhout
Professor Arthur B. Ferguson
Professor Edward K. Kraybill
Professor Julia W. Mueller
Dean Mary Grace Wilson
Professor Jane Philpott, *Chairman*
Dean Florence Brinkley, *ex officio*

Some of the committees listed above completed their work many months ago and were thanked and discharged. The Planning Committee has recommended to the President that he discharge, as of June 1st, the Planning Committee itself and all of the subcommittees not yet discharged. It has further recommended that five of these committees, which are still needed, should be reappointed or reconstituted by the President as University committees. They are: the Planning Committee, the Committee on a University Arts Center, the Committee on Matters Related to the Woman's College and the East Campus, the Committee on Matters Related to Biological Psychology, and the Committee on Matters Related to Biophysics. The President has accepted these recommendations.

CHAPTER VIII

The Future of Planning

The Inception of Planning. In the spring of 1958, a committee on long-range planning of the University Council reviewed and endorsed a statement of procedure for long-range planning submitted to it by the Vice President in the Division of Education. On May 30, 1958, the Executive Committee of the Board of Trustees approved the statement, urged its activation, and provided a budget for the first year of operation. The President appointed a University Committee on Long-Range Planning, the personnel of which was announced on September 2nd. Two years of the activities of this Committee and of its numerous subcommittees and other collaborators are recorded in the *First Progress Report* (June 1959) and the *Second Progress Report* (May 1960). As the third year of intensive planning draws to a close, it seems appropriate to appraise accomplishments and to indicate what provisions might be made for the future.

The Results of Planning. The tangible results of long-range planning are numerous and substantial. They have already been enumerated in the *First* and *Second Progress Reports* and throughout this report. There are less tangible results, which also deserve mention. One of these is surely the heightened awareness which the University community has of what Duke has been, is, and means to be. This awareness comes not merely, nor even principally, from reading reports; it comes, rather, from broad participation in institutional self-study. One of the virtues of such participation is that it gives to Faculty and Staff an important role in shaping the destiny of the University.

Long-range planning has involved many people in the task of defining the goals of the University and of suggesting procedures for attaining them. The sustained effort which goes into the elaboration of goals and procedures inevitably generates high expectations. If these expectations are not expeditiously satisfied, dissatisfaction and disappointment may result. This is one of the psychological hazards of long-range planning. But dissatisfaction is also a condition of progress, and unfulfilled expectations may be a moving force. One has the impression that such a force is now at work in the University.

The Continuing Need for Planning. Three years of intensive long-range planning have produced more suggestions for the advancement of Duke than it has been possible intelligently to weigh and to implement. These suggestions must not be lost. This reason alone would be sufficient to justify the continuation of long-range planning, but there are others. The principal one may be stated simply: The orderly growth of an institution as complex as a modern university cannot take place without careful planning.

The Organization of Future Planning. The Committee considers systematic planning absolutely essential. Should it be continued indefinitely, then, and in its present form? The Committee thinks not. It is too heavy a burden to be carried year after year by an *ad hoc* committee; its function should be institutionalized so as to achieve continuity and wide participation throughout the University.

If no one committee should be asked to carry indefinitely the work load and the responsibility of long-range planning, what kind of machinery should be set up to cope with them? The present Committee suggests a division of labor between two agencies: an office of institutional studies and a planning committee. A brief description of the functions of each of these agencies follows.

Successful planning requires that those who plan have access to the factual data and informed opinions which bear on whatever areas of university operations are to be brought under study. Heretofore, the Planning Committee and its Subcommittees have been obliged to locate and assemble such data before proceeding to the central business of planning. The proposed Office of Institutional Studies could relieve the Planning Committee of this preliminary work. At the request of the Committee, the Office would undertake studies of any subject the Committee desired to consider. For this purpose, it could bring distinguished consultants and speakers to the campus and support faculty visitations to other universities and research centers. It would not make policy decisions.

The Office of Institutional Studies might, on request, perform the kind of service mentioned above to any office or division of the University. It would become the repository of the reports and records accumulated by the Planning Committee during the past three years and of other pertinent materials bearing on higher education.

The new Planning Committee would be drawn largely from the Faculty and would proceed with its work at a more deliberate pace than has characterized the intensive effort of the last three years. It would be appointed by the President and would report to him. It should be constituted in such a way as to bring about some annual rotation of membership. Over the years, this rotation would enrich the deliberations of the Committee with the varied talents of many individuals and the special knowledge and perspective of many disciplines. No longer burdened with the work to be assigned to the Office of Institutional Studies, it could make a worthwhile contribution to the advancement of the University.

The present Planning Committee has acknowledged in all of the printed reports its debt to the many individuals and groups that have participated so effectively in the work of long-range planning. As this Committee brings to an end its own labors, it remembers with special gratitude the unflagging support it has received from the entire University community.

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